COMMERCE AMERICA

U.S. Department of Commerce / June 6, 1977

THE CASHLESS SOCIETY IS PRACTICALLY HERE

Newsmemo

Readers of "Commerce Business Daily" are seeing a sharp upswing in U.S. Government architect-engineering contracts. Listed in the January-April period were $108 million of such contracts, compared to $56 million and $55 million in the 1976 and 1975 periods. Reflected here is an increase in opportunities available to private A & E firms as well as a general increase in federal construction. For more on "Commerce Business Daily" and its listing of significant government contract and procurement opportunities write for a free sample copy and brochure to Room 1304, 433 W. Van Buren St., Chicago, Ill. 60607.

The U.S. will expend about $40.8 billion this year in research and development activities. This "investment in the future" by the Federal Government and such non-governmental groups as industries, colleges and institutions represents a 9 percent increase over 1976. Spending by federal agencies will total about $21.8 billion, and spending by others about $19 billion, according to figures compiled by the National Science Foundation.

Judged against total GNP, the U.S. level of R & D spending has been in steady decline. The peak of 3 percent was reached in 1964. Currently we spend about 2.2 percent of our Gross National Product for research and development. The falloff is due primarily to a slowdown in federal funding of R & D activity.

Between 20 and 50 percent of the food harvested in the poorer nations is lost on the way to the table. That observation by the head of the UN Food and Agriculture Organization underlies his plea to the U.S. farm and business community to help turn this situation around. What's needed are more storage facilities in villages and cities, better farm-to-market transportation and improved equipment for controlling destructive pests. About half of all food aid to the world's hungry peoples is provided by the U.S.

The "company picnic," source of many a memory in America's industrial towns, has a new and current note. Its site, in many instances, is the theme park that now caters to family recreational clientele. Kings Island in southern Ohio, for one, will be the scene of a company-sponsored outing for Cincinnati Milacron employees and their families. Procter and Gamble will take over the park on another day (last year 35,000 came out). General Electric has a Kings Island Day for which employees can purchase tickets through payroll deductions.

American answers to the problems of the disabled are of interest everywhere. That is the premise of "Rehabilitation USA," an exhibition-seminar to be held Nov. 7-11 at the U.S. Trade Center in Tokyo. It is expected to display technologies and applications so advanced as to be generally unknown outside U.S. medical circles. It will be publicized by the Commerce Department in the Far East and Australia. It will be open to governmental health and welfare officials, physicians, psychiatrists, therapists, nurses and social workers, and executives of educational and research institutions. About 25 U.S. producers of rehabilitation equipment are now being recruited for it.

Fifteen states have ordinances or regulations providing protection against deceptive auto repair practices. Full parts and labor cost disclosure and customer authorization provisions are called for in California, Connecticut, Florida, Hawaii, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, Ohio, Utah, Wisconsin and the District of Columbia. An informative booklet, "Summary of Auto Repair Legislation and Regulations of the Fifty States," is available at $4.50 from the Automotive Parts and Accessories Assn., 1025 Connecticut Ave., NW., Washington, D.C. 20036.

An Institute for Constructive Capitalism? It's a newly-organized research unit of the University of Texas Graduate School of Business. According to its founders, it aspires to become a nationally recognized "think tank" for the private sector. It will subject capitalism to the scrutiny of objective academic research and provide ideas about ways in which the private sector may respond more effectively to help solve society's problems in a time of rapid socio-economic and cultural change. Support for the institute is being sought from private funds.

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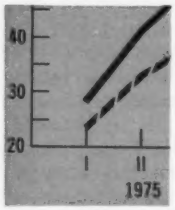

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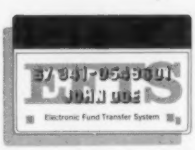

COVER: The shift to electronic fund transfer systems strongly affects commercial banks, mutual savings banks, savings and loan associations and credit unions as the cashless society appears to be near at hand for Americans.

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Profits Show Little Change Despite Strong Rise In Output

This column was prepared by Commerce Chief Economist Dr. Courtenay Slater, in collaboration with staff economist G. Donald Hanrahan.

Dr. Slater

A substantial increase in output usually results in a rapid rise in profits, but this was not the case in the first quarter of 1977. Output increased strongly, but some production moved unevenly as winter storms caused shutdowns and delays in shipments. Profits showed little change from the previous quarter. However, the recovery of profits over the past two years had already put corporations in a strong liquidity position. Recent surveys indicate that corporate executives are becoming increasingly optimistic about business conditions in the near future.

After-tax corporate profits increased only 1 percent in the first quarter and, for the first time since the recovery began, after-tax profits in real terms declined slightly. Even so, profits after taxes were 10 percent above the corresponding period of 1976 in current dollars and almost 5 percent greater when corrected for inflation. Profits from current production—that is, adjusted to reflect the current cost of replacing inventories and capital—declined for the second consecutive quarter, but at a slower pace than in the fourth quarter.

The rapid inflation of recent years has affected business profits in two significant ways. First, inventory profits have resulted as goods held in stock were revalued upward to reflect the rise in their market prices; second, some of the purchasing power of profits has been eroded since capital used up in production could be replaced only at higher cost. After adjustment for these two factors, profits showed increases in the first three quarters of 1976 but declined in the fourth quarter, when the rate of inflation accelerated, and again in the first quarter of 1977. Measured this way, first quarter profits were at approximately the same level as a year earlier.

The slowing of profit growth in recent quarters reflects a change in the relationship between costs and prices. Real final sales have been rising and, if there had been no change in profit per unit of output, total profits would have risen in a similar fashion. Changes in the cost-price relationship in part reflect changes in productivity.

In manufacturing, for example, productivity increased strongly for several quarters after the trough of the recession as the economy expanded. The productivity increases reduced the cost of labor input per unit of manufactured goods. In the second quarter of 1976, however, unit labor costs started to increase as advances in compensation exceeded productivity gains. The gap between labor costs and product prices narrowed, and this trend continued into the third and fourth quarters. Gains in manufacturing productivity ceased in the fourth quarter when growth of the economy slowed. Productivity again failed to advance in the first quarter of this year, probably due to the production disruptions caused by severe winter weather.

The after-tax profit margins of corporations increased throughout 1975 and in the first half of 1976, although the pattern varied considerably among industries. In manufacturing, the profit per dollar of sales rose from 3.8 cents at the depth of the recession to 5.0 cents two quarters later, and then to 5.5 cents in early 1976—but there have been only very small rises since then. The 1976 profit margins in manufacturing were comparable to those of 1965-66 and 1972-73, two periods generally considered highly favorable for profits. Corporations engaged in retail trade also enjoyed strong profit gains, but the margin varied from 1.8 cents per dollar in the first quarter to 3.0 cents in the fourth.

Margins were much larger for large firms in 1976. Companies with assets of $1 billion or more had profit margins four times the size of smaller firms' margins.

The rate of return on stockholders' equity, measured in current dollars, also compared favorably with highly profitable years in the past. The rate of return in manufacturing, after taxes, was 13.9 percent in 1976 as compared with 13.5 percent in 1972-73. When a real rate of return is calculated by dividing real profits by real corporate capital stock, recent rates of return are substantially lower than the peak years. This has sometimes been cited as a cause for the lack of ebullience in business investment. It should be remembered, however, that real rates of return on equity investment must be compared to real (rather than nominal) interest rates in order to accurately assess alternative investment opportunities. Even more important, it is the expected future rate of return rather than the past that is most relevant to investment decisions.

There seems to be little doubt about the improved financial position of corporations. Net cash flow swelled 19 percent in current dollars and 12 percent in real terms in 1976. The debt-equity ratio of 2.51 in the fourth quarter of last year was much improved over the 2.26 reading at the bottom of the recession.

Strengthened liquidity may be one reason for the recent rise in business confidence which has been reported by private business organizations. This shift in attitude would be even more significant if it reflects executives' anticipation of higher profits in the future.

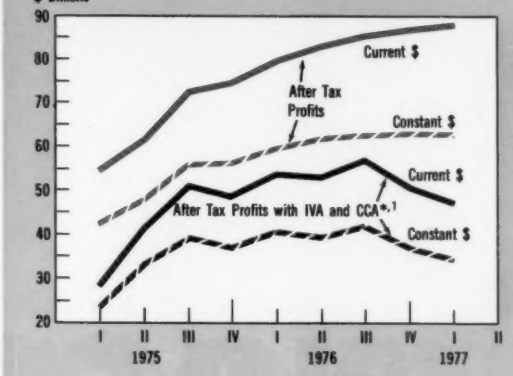
This perception of a flow of future profit from capital is a fundamental ingredient in the decision to invest in fixed capital. Important determinants of profitability are the long-term rate of interest and the price of capital items. Both of these were favorable to investment planning in 1976. The corporate bond rate declined during the year, and the price deflator for nonresidential fixed investment rose less than 5 percent.

Real non-residential fixed investment rose 6.7 percent from the fourth quarter of 1975 to the fourth quarter of 1976, and a somewhat stronger rise would appear to be in prospect during 1977.

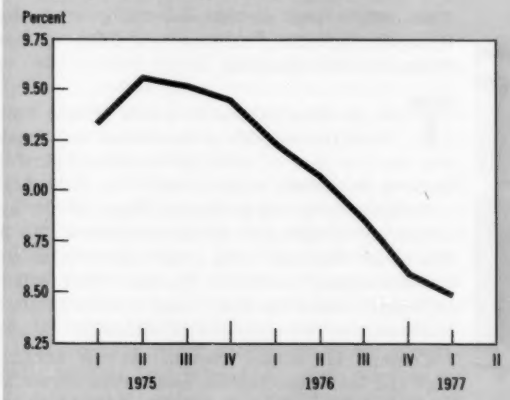
A continued and even stronger rise in business fixed investment is required in future quarters if investment is to provide a major, sustaining element of economic growth.

After–Tax Corporate Profits

(Seasonally Adjusted Annual Rate)

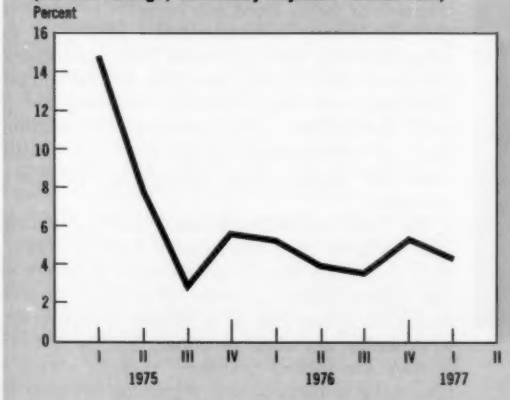


Corporate Bond Rates, All Industries[5]



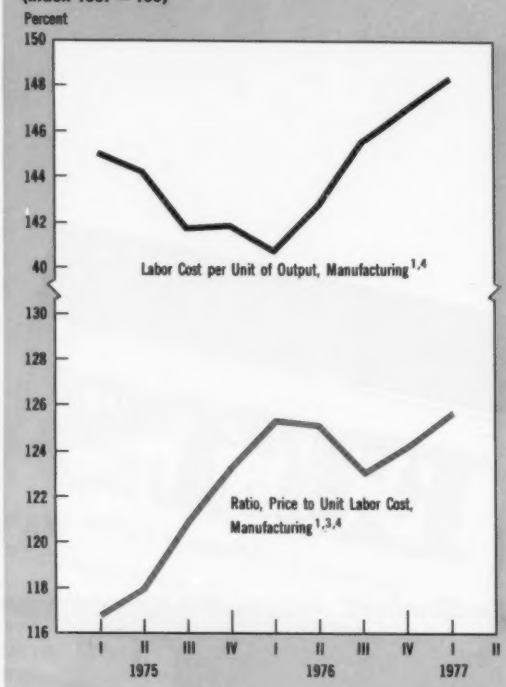
Capital Goods Prices[1]

(Percent Change, Seasonally Adjusted Annual Rate)

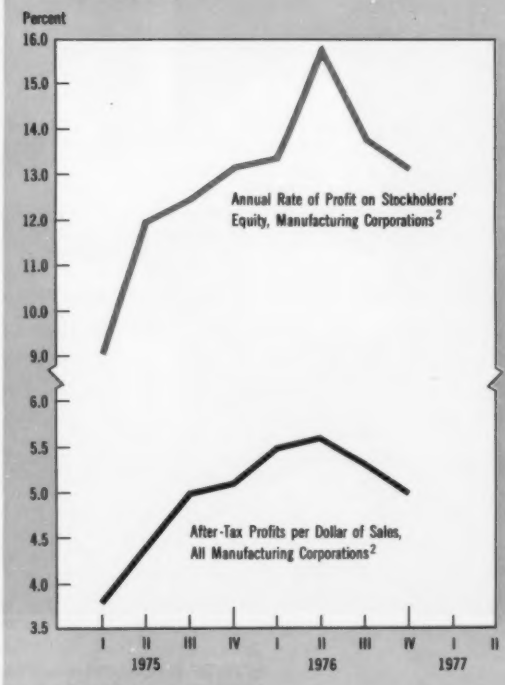


Prices and Labor Costs, Manufacturing

(Index 1967 = 100)



Profit Indicators



*Inventory Valuation and Capital Consumption Adjustments

SOURCES: 1– U.S. Dept. of Commerce; 2– Federal Trade Commission; 3– Board of Governors of the Federal Reserve System; 4 –U.S. Department of Labor; 5–Moody's Inc.

THE CASHLESS

BANKER'S HOURS—Self-service financial terminals have already brought 24-hour-a-day banking to many customers.

This article was excerpted from a study by Dr. Wray O. Candilis of Commerce's Office of Business Research and Analysis.

The growing volume of paper checks has long been the subject of discussion and apprehension on the part of both the banking industry and banking regulatory authorities in the United States.

In order to avoid a total collapse of the system under an avalanche of an estimated 50 billion checks for the year 1985, new methods and systems are developing electronic processes that will largely replace coins, currency, and checks as the most important media of economic exchange.

Commercial banks, mutual savings banks, savings and loan associations, and credit unions will be most strongly affected by the shift to electronic fund transfer systems (EFTS) as they compete with each other and with non-depository financial institutions for customers.

The use of Automated Teller Machines or Customer-Bank Communication Terminals for the deposit of funds, the withdrawal of cash by debiting savings, checking, or credit card accounts, and the transfer of funds from one account to another, will give depository institutions the ability to expand geographically and to provide their customers with 24-hour service. These machines are completely unattended, with the customer inserting his plastic card and keying in the required information; the data are transmitted to the financial institution's computer system which updates the account being accessed.

The first automated banking facility of this kind was installed by a commercial bank in 1969; since then thousands have been installed in banks around the country, many of them off-premise installations that have given rise to a serious controversy as to whether or not such terminals are bank branches. If they are indeed branches, then in states where branching is illegal, such terminals are also illegal; in states where branches are permitted, the ter-

SOCIETY IS PRACTICALLY HERE

minals can be installed only if the normal procedures for establishing a branch are followed.

The controversy ended up in the courts, where finally the Supreme Court refused to review a lower court ruling that bank devices set up in public places are branches and, therefore, illegal where branch banks are prohibited.

Distinctions between various types of accounts will gradually end as payment systems become more and more automated and checking accounts lose their attractiveness. This trend has been demonstrated repeatedly by mutual savings banks in New Hampshire and Massachusetts which, in their desire to make their industry more competitive, have instituted the NOW (negotiable order of withdrawal) account, an interest-bearing account on which negotiable orders of withdrawal can be drawn. Commercial banks around the country will have to consider offering similar services to their customers, a procedure that, coupled with EFTS, will inevitably diminish the checking account's importance.

The EFTS impact on savings and loan associations is more difficult to predict because of these organizations' special position in the housing market. Initially established to assist in the channeling of funds to housing, they have for years been trying to broaden their lending powers to include home improvement and personal loans. At present, with the expansion of electronic networks, they are in the process of participating in debit and credit card programs and considering the possibility of developing third-party payment powers.

Not to be outdone, credit unions also have recently expanded their services to include home mortgage loans up to 30 years, home improvement and mobile home loans up to 15 years, participation in federally guaranteed loans, and raising to 12 years the maximum loan maturity for consumer or personal loans. Third-party payment powers are a distinct possibility in the not-to-remote future, in the form of share drafts.

Non-depository institutions such as finance companies have also been aiming at access to an overall electronic network. Although not involved in third-party payments, finance companies are demanding direct participation in both the sending and receiving of items through automated clearinghouses and remote terminal facilities, since they would like to see all consumers—not only depositors—benefit from the convenience of an electronic transfer system.

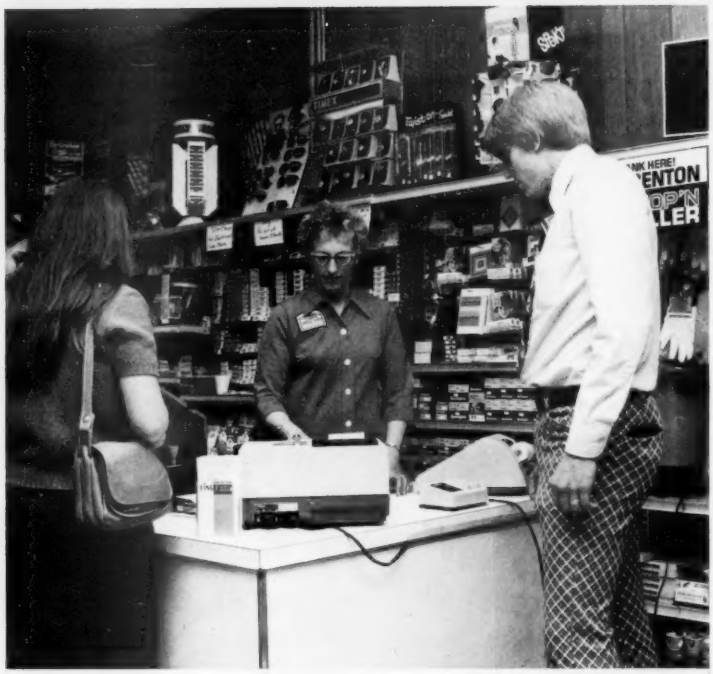
Insurance companies and securities dealers are also looking into early involvement in EFTS. Monthly premiums to insurance companies, the payment of annuities by them, and the distribution of dividends and interest payments to owners of securities can all be more efficiently processed through an automated clearinghouse.

The two national bank credit card organizations are already utilizing electronic technology and are expected to be in the forefront in any new development in EFTS. Integration in a future nationwide electronic network is also being considered by some independent national organizations which issue travel and entertainment cards.

Among non-financial businesses, retailing probably will be impacted most by the electronic transfer of funds. POS (point-of-sale) equipment linked to a central computer is now in widespread use by department stores, providing instant, detailed sales data, helping to reduce clerical errors, and providing on-line inventory controls. Additional benefits include rapid cash register balancing, reduction in audit expense, and speedier credit authorization procedures.

Future provision of true fund-transfer services through the interconnection of POS terminals with computers at depository institutions would cut down significantly on the cost of handling checks, cash, or credit cards, would reduce the balances merchants must keep at their banks, and would allow retailers to offer a variety of services presently transacted through financial institutions.

Distinctions between various types of accounts will gradually end as payment systems become more and more automated and checking accounts lose their attractiveness.



POINT-OF-SALE SYSTEMS—At present, most POS messages relate to check certification and guarantee services, but the ultimate objective is to transfer funds from the customer's account to the merchant's.

Among the many sectors of the economy that will eventually be impacted by EFTS, none has expressed as much concern as the American public. Consumers seem to be fairly satisfied with the current payments system and are wary of changes whose consequences they do not clearly understand. Their anxiety covers a variety of subjects, the most important of which relate to freedom of choice, convenience, security, privacy, cost, rights, and liabilities.

Insurance companies and securities dealers are also looking into early involvement in EFTS.

For EFTS to win general acceptance, it is essential that consumers retain their freedom to choose among alternative forms of transacting financial affairs, namely cash, checks, or credit cards.

Choice and convenience have always been the primary concerns of bank customers. With EFTS providing them with more convenience and benefits than the present payments systems they are more liable to support it. Accessibility to funds at any time of the day or night, broader geographic coverage in transactions, quicker and easier transfer of funds, are some of the potential advantages that would turn consumers into proponents of an electronic system; but they have to view it as an improved system, not a substitute.

For that reason they must be convinced that although they will be the beneficiaries of new services, they will not have to give up long-established ones which they have grown to view as rights not to be tampered with.

More specifically, consumers would like to be assured that there will not be a loss of "float," which involves funds being credited to an account before they have been debited from another account. A unique characteristic of the present system of paying by check, the float enables those who have checking accounts to write checks although there are insufficient funds in the account at the time. This advantage will naturally disappear under EFTS, since electronic payments are tantamount to paying in currency.

Of course, it is technologically possible to provide for the existence of float in an electronic system, but such an exercise would be costly and would be opposed by those who did not use it.

Another concern expressed by consumers is that EFTS will end their ability to stop payment in the event they are dissatisfied with purchased merchandise. As in the case of float, the stop payment tool will inevitably disappear under EFTS; however, once again arrangements could be made to build it in the system in the form of reversible transactions or value dating.

Currently, consumers use cancelled checks and credit card statements as proof of payment; under an electronic system an equally satisfactory method could be devised as a means of detecting and eventually correcting errors. Consumers could be induced to retain electronically-generated receipts or, more likely, financial institutions could be required to keep a record of transactions.

More emphasis would have to be placed on recording payments and correcting errors in an electronic environment, because such an account could be accessed in a variety of ways—automated teller machines, pre-authorized payments, telephone transactions—making it essential that the depositor keep a close and continuous eye out for possible human as well as computer error.

Although choice and convenience will probably have more of an impact on the consumer's acceptance of an expanding electronic network, it is the areas of privacy and security that have attracted more attention and publicity. This is so because of the widespread belief that the efficiency and centralization of the new system would make it more difficult for people to keep their financial data away from prying eyes.

Financial institutions with their huge data banks will be under continuous pressure from both the private and government sectors; credit bureaus, financial analysts, marketing organizations, and ad-

vertising firms will find EFTS-originated data very helpful and profiitable, while the Internal Revenue Service and the Federal Bureau of Investigation will do their utmost to acquire such data whenever they deem it necessary.

Considering the potential for invasions of privacy, consumers will demand some form of guarantee that the information collected and stored will not be available for unauthorized use. The decision as to what is authorized or unauthorized will have to be stipulated beforehand in the regulations establishing the system. This is unavoidable if EFTS is going to enjoy the full backing and confidence of the American consumer.

Although electronic fund transfer is only in its infancy, problems are already surfacing and will multiply in the years ahead as electronic systems take over from their paper-oriented counterparts. The change will be gradual and EFTS will probably never be universally used, just as checks are not presently used for all transactions. But problems will exist, and consumers will have to be protected from financial losses caused by the implementation of the new technology. Guidelines should be provided, therefore, by a government agency or public corporation that will also operate the infrastructure necessary for the electronic transfer of funds.

The basic elements of such an infrastructure are already in place in the form of automated clearinghouses (ACHs) operated by the Federal Reserve System. Clearing and settlement for such payments are provided free of charge to participating depository institutions in the same way as the clearing and settlement of checks.

This part of EFTS will obviously continue expanding as batched electronic payments become more numerous and networks become more efficient. At the same time, cost per payment will be reduced as economies of scale take hold and access is broadened to include other classes of financial institutions. The Federal Reserve might be compelled to charge a slight fee for private transactions, but the impact of increased ACH services on Federal Reserve overall operations is expected to be minimal.

The future impact of point-of-sale (POS) systems on government is not as clear as that of ACH systems. A POS is a system that transmits a message electronically from a terminal at a merchant's outlet to a depository institution. At present most of the messages relate to check certification and guarantee services, but the ultimate objective is to transfer funds from the customer's account to the merchant's.

Furthermore, if more than one depository institution is involved in the funds transfer then a switch is required that would route the messages to the accounts affected. It is these switches that might require some kind of role by the government.

The Federal Reserve, again, is considered as the most likely candidate for the operation of the switches since it possesses the telecommunication facilities and computers necessary for the job. It has, however, been reluctant to enter the field. But if the private sector is unable or unwilling to participate, the Federal Reserve or another government agency will be forced to establish and operate POS switching facilities in addition to their ACH systems.

Some feel that electronic fund transfer will evoke several changes in the implementation of monetary policy, but they will be gradual because the adoption of EFTS itself will come in stages. Others believe that though the Federal Reserve will face increasing difficulties in managing monetary policy, they will be only peripherally connected to electronic fund transfer. For instance, new developments relating to the abolition of interest rate ceilings, to third-party payments by thrift institutions, to payment of interest on demand deposits, and to institutional and regulatory reform could make the Federal Reserve's task more strenuous. What effect the simultaneous introduction of EFTS will have remains widely debatable.

Therefore, although the management of the nation's money supply might become slightly more complex, problems that do develop probably will not be insurmountable.

It is obvious that the new processes have created a large number of unresolved issues and a multitude of uncertain economic implications. Consequently, Congress established a National Commission on Electronic Fund Transfers to conduct a thorough study and recommend necessary administrative actions and legislation. But with the Feder-

Consumer anxiety covers a variety of subjects, the most important of which relate to freedom of choice, convenience, security, privacy, cost, rights and liabilities.

Research Reports On EFT

Research reports on Electronic Fund Transfers can be obtained from Commerce's National Technical Information Service. Available titles are:

Charting The EFTS Course, PB-261-143/2CZ. Paper copy $3.50.

Syracuse EFT Case Study: Some Consumer Issues, PB-261-142/4CZ. Paper copy $4.00.

The Branch/Competitive Impact Issue, PB-261-141/6CZ. Paper copy $5.00.

A Procedural Guide For The Conduct of Public Hearings, PB-261-140/8CZ. Paper copy $4.50.

The Competitive Impact Criteria In The Branch Process of Federal Regulatory Agencies, PB-261-139/0CZ. Paper copy $4.00.

A Competitive Market Approach To The Use, Access and Control of Electronic Funds Transfer Systems, PB-261-137/4CZ. Paper copy $3.50.

All of the reports were published by the National Commission on Electronic Fund Transfers, Washington, D.C. Microfiche copies are priced at $3.00 each.

The reports may be ordered from NTIS, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Va. 22161. Please order by number, specify paper copy or microfiche. Enclose payment in full and provide complete mailing address.

al Government's apparent inclination to postpone legislation at least until it receives the Commission's report later this year, many state legislatures have had to pass laws dealing with various aspects of electronic transfer systems.

Of the 26 states in which laws were in effect in 1976, the majority do more than give financial institutions the power to develop electronic fund transfer projects. Many provide for the sharing of systems among financial institutions, some limit the participation of out-of-state financial institutions, and a few deal with issues such as privacy and consumer protection.

To a large extent, this legislation seems to have developed in a vacuum. However, state laws are now among the most extensive legal pronouncements on the subject and, as such, will probably influence the thinking of those who are developing EFT systems and those who draft legislation in other states and at the federal level.

The differences among these legislative efforts are substantial, and many observers say they may impede a smooth, efficient, and uniform national payments mechanism. As a remedy, several interested organizations have put forth model bills for adoption by all states.

Financial institutions with their huge data banks will be under continuous pressure from both the private and governmental sectors.

An indication of the shape of things to come was provided by the National Commission's interim report to Congress in March, which contained findings and recommendations covering the six following major areas:

EFTS and the Consumer—The Commission recommended that fair choice among available payment methods be preserved and that unfair or discriminatory pricing among competing payment methods be prohibited. Acceptance of a particular service or participation in a particular depository institution should not be mandated as a condition of purchase, employment, or receipt of benefit.

On the subject of privacy, the report suggested federal legislation granting the individual the right to contest any government access to financial transaction information, and making all third-party private-sector use of information concerning an account without the individual's specific consent illegal.

The report said the depository institution should be liable for erroneous, unauthorized, or fraudulent use of the account unless it can demonstrate that it exercised reasonable care and that consumer negligence or fraud substantially contributed to the problem.

With regard to float, the Commission believes it is not a legal right but rather a characteristic of the present payment system; there are alternatives such as checks and value dating to meet consumer concern in this area.

The Branch/Terminal Issue—The Commission concluded that rules regarding the deployment of off-premise electronic fund transfer terminals should be separate and distinct from, and less restritive than, the rules regarding the establishment of conventional brick and mortar branches. It recommended, therefore, that national banks be authorized immediately to deploy terminals in the state in which they are located, in accordance with the state's laws pertaining to deployment of terminals by state banks. It also recommended that Congress establish a date after which federally-chartered depository institutions would be authorized to cross states lines to offer electronic depository services in natural market areas, regardless of whether state-chartered institutions are permitted to do so.

Sharing of systems—The Commission endorsed pro-competitive sharing that would ensure sharing where agreed to by the parties and consistent with antitrust laws. Sharing, if challenged, would be decided on a case-by-case basis, depending upon the effect such sharing would have on competition in the market involved. It was also suggested that Congress provide an inexpensive procedure for expedited access through injunction obtained from a U.S. district court upon demonstration that no alternative system was available and serious economic injury would most likely result from exclusion.

Government operations—With respect to automated clearinghouses, the Commission concluded that it is appropriate for the Federal Reserve to continue to provide the type of service necessary to clear and settle batched electronic payments between depository institutions locally, regionally and inter-regionally. With respect to point-of-sale switching and clearing facilities, the Commission thinks the Federal Reserve should not be involved operationaly except for providing net settlement among depository institutions, although it feels it may become appropriate at some point to have the government step in to correct market imbalances or to ensure an efficient and effective national payments system.

Impact on monetary policy—The Commission does not believe that definite conclusions can be reached at this time as to the institutional or operational changes in monetary management that the development of electronic fund transfer may require.

Technology—Companies in the electronics industry do not usually conduct research on consumer attitudes but rely for this information on the studies prepared by user financial organizations and independent firms. The Commission, therefore, holds that the financial institutions will have to base their plans on their own studies regarding consumer needs and desires, with the vendors designing and supplying the equipment to meet the necessary specifications.

The electronic transfer of funds is no longer a dream that might come true in the '80s or '90s. It has already become a reality. It is presently in operation in the form of automated clearinghouses, automated teller machines, preauthorized payments, and point-of-sale terminals. Over the past several years there have been significant breakthroughs in the application of computer and communication technologies that are moving the United States toward an exchange mechanism structured around electronic impulses.

It should not be assumed, however, that all existing mechanisms relating to public and private debt instruments will be completely displaced in the near or distant future. Different systems will function side by side while the public becomes accustomed to the innovations and while federal and state legislative procedures gradually establish the appropriate framework. Change is inevitable, but it is also slow and laborious.

Energy Digest

GEOTHERMAL GUARANTY . . . The Energy Research and Development Administration (ERDA) has approved the first loan guaranty for a commercial geothermal energy project, a $9 million guaranty to Republic Geothermal of Santa Fe Springs, California, and the Bank of America. "In this way, a lender's risk in financing commercial-scale geothermal operations is minimized," said acting ERDA Administrator Robert W. Fri. "We hope this program will in time encourage the flow of credit for commercial geothermal development without the need for federal assistance." Currently, ERDA is evaluating six other applications for geothermal loan guarantees in Utah, New Mexico, Nevada and California.

INDUSTRY DOES IT BETTER . . ."It should be possible, through a combination of economic incentives, regulation, moderately improved technology and public information to substantially reduce energy demand growth in the transportation and household and commercial sectors," according to Henry R. Linden, president of Chicago's Institute of Gas Technology. "As a result of a long history of low energy costs in the United States, energy efficiency was never a major concern for these sectors and can be greatly improved. Further, they are based, on the whole, on relatively unsophisticated technology so that the need for new conservation technology is not a serious obstacle. To change fundamental energy consumption patterns in industry is more difficult, because of the large capital and lead time requirements. However, the industrial sector has a much better record of energy conservation and, because of its sophistication, has already responded quite well to the rapid escalation of energy costs."

ENERGY EDUCATION . . . ERDA is sponsoring a conference for educators on the educational challenges of the energy situation. The conference, to be managed by the Council for Education Development and Research (CEDaR), will be held June 22-24 at the Hyatt Regency Hotel, Washington, D.C. For registration material and further information, contact CEDaR, 1518 K St. NW., Washington, D.C. 20005 (202-638-3193).

WHICH ARE THE COOLEST? . . . Energy information about virtually all refrigerators and freezers sold in the U.S., as well as more than 1,400 room air conditioners currently on the market can be obtained in two booklets priced at 50 cents apiece. The Association of Home Appliance Manufacturers refrigerator-freezer directory lists volume, square feet of shelf area and energy consumption on 45 brands and more than 1,100 models. The Association's air conditioner directory lists the energy efficiency of room cooling units. Both booklets are available from AHAM at 20 N. Wacker Drive, Chicago 60606.

FUEL ECONOMY PROGRESS . . . General Motors' average fleet fuel economy for 1978 will exceed 19 miles per gallon, according to GM President E. M. Estes. "Our preliminary figures for the 1978 model year indicate that our average fleet fuel economy will be well over 19 miles per gallon if 1977's federal emissions standards are carried over." Estes pointed out that GM has increased the fuel economy of its cars by almost 50 percent since the fall of 1973, from 12 miles per gallon then to nearly 18 miles per gallon for its 1977 models. "We support the objectives of President Carter's energy plan and we particularly commend his courage in telling the American people the unpleasant truth—that there is an energy problem, it is real, not contrived, is getting worse and everybody is going to have to contribute to solving it."

ENERGY FROM THE SEA . . . ERDA is negotiating with TRW of Redondo Beach, Calif., to design and build heat exchangers for the agency's Ocean Thermal Energy Conversion (OTEC) program. They will be installed on a 300-foot-long converted barge as part of a test loop simulating a one-megawatt generating cycle. If successful, the loop would validate OTEC heat exchanger performance in an ocean environment. First ocean tests are planned for early 1979.

SOLAR PERSONNEL . . . Battelle Memorial Institute is canvassing professional, technical and craft manpower employed in the solar energy field. By determining the numbers, types and characteristics of solar energy manpower, Battelle's analysts hope to develop more accurate forecasts of the personnel required to develop a nationwide solar energy industry. Studies will focus initially on manpower needs between now and the year 2000.

Domestic Business Report

$175 Million Fund To Aid Drought-Plagued States

SPECIAL OFFICES WILL HANDLE WATER PROJECTS IN 24 STATES; OTHER AREAS MAY BE ADDED

Eighteen entire states and more than 200 counties in six others are eligible for assistance under a recently-approved $175 million drought relief program.

The Community Emergency Drought Relief Act of 1977 was enacted in response to the severe drought conditions experienced in many areas of the nation during the past two years. It authorizes grants and loans to states, political subdivisions with populations of 10,000 or more, Indian tribes, and non-profit organizations for water projects in drought-stricken areas.

The initial list of areas eligible for emergency drought assistance includes the states of Arizona, California, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Utah, Wisconsin and Wyoming, as well as 52 counties in Arkansas, 52 in Illinois, 41 in Michigan, 36 in Oregon, 33 in Texas and 26 in Washington.

May add other areas

Other areas, which may be designated upon the request of state Governors, can be added to the list in the near future.

Sixteen field offices of Commerce's Economic Development Administration will administer the program, which will be expedited with special procedures to accelerate the review and approval of individual drought relief projects.

Rural areas and communities under 10,000 population will be served by the Department of Agriculture's Farmers Home Administration.

The Commerce program will help applicants improve and enlarge water systems, purchase and transport water for immediate relief from drought conditions, implement water conservation measures, and carry out other activities that promise to mitigate the effects of the drought.

"These are short-term actions that can be initiated immediately to help assure adequate water supplies for health, safety and economic stability," Secretary of Commerce Juanita M. Kreps said in announcing the program.

She said the the Economic Development Administration has staffed the 16 field offices, as well as a headquarters unit in Washington, to assist communities in areas affected by the drought.

Eleven offices will serve solely as information centers, while five field offices and the Washington drought staff will process applications.

Tight schedule

Because of the immediacy of the problem, the period for project approval and completion is tight. EDA has set a Sept. 30 deadline for completing all project approvals. Applicants are responsible for insuring that individual projects are completed by April 30, 1978.

The five EDA field offices that will process applications are:

—Federal Bldg., Room 2366, 915 Second Ave., Seattle, Wash. 98174: serving Idaho, Oregon and Washington (206-442-1482);

—Suite 830, American Bank Tower, 221 W. Sixth St., Austin, Tex. 78701: serving Arkansas, New Mexico, Oklahoma and Texas (512-397-5941);

—1025 Civic Towers Bldg., 32 West Randolph St., Chicago, Ill. 60601: serving Illinois, Michigan, Minnesota and Wisconsin (312-353-8143);

—Suite 505, Title Bldg., 909 17th St., Denver, Colo. 80202: serving Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah and Wyoming (303-837-5441), and

—Suite 600, Federal Bldg., 1515 Clay St., Oakland, Calif. 94612: serving Arizona, California and Nevada (415-273-4291).

For the present, the balance of the country will be served by the Economic Development Administration, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-3027).

The EDA drought relief information offices are at:

Suite 101, 2402 Merced St., Fresno, Calif. 93721 (209-487-5356);

Suite 900, 11777 San Vicente Blvd., Los Angeles, Calif. 90049 (213-824-7521);

Room W-1446, New Federal Bldg., Sacramento, Calif. 95825 (916-484-4314);

Suite 700, 1365 Peachtree St., N.E., Atlanta, Ga. 30309 (404-526-2857);

Suite 304, 2404 Bank Drive, Boise, Idaho 83705 (208-384-1421);

Room 407, 515 W. First St., Duluth, Minn. 55802 (218-727-6692, Ext. 326);

121 Sandoval St., P.O. Box 2662, Santa Fe, N.M. 87501 (505-988-6557);

Room 354, Federal Bldg., Third and Rosser Sts., P.O. Box 1911, Bismarck, N.D. 58501 (701-255-4011, Ext. 321);

Room 815, Post Office Bldg., N.W. 3rd and Harvey Sts., Oklahoma City, Okla. 73102 (405-231-4197);

Room 611, 1220 S.W. 3rd Ave., Portland, Ore. 97204 (503-221-3678), and

Suite 10424, 600 Arch St., Philadelphia, Pa. 19106 (215-597-0405).

Quality Control Papers Sought For Conference

Papers on quality control are being sought for the 32nd Annual Technical Conference to be held next May in Chicago, according to the American Society for Quality Control. Submissions must be original, not previously published nor presented at a national meeting.

Those interested in submitting a paper should first request a speaker's data sheet from the chairman of the Technical Conference Program Committee, Jay W. Leek, Manager, Product Assurance, Northrop Corp., Defense Systems Divisions, 600 Hicks Rd., Rolling Meadows, Ill. 60008. The completed data sheet must be returned to Leek no later than July 15, 1977, with an abstract of the full paper and a short biographical sketch.

Authors whose papers are selected will be notified by October 3, 1977. Final camera-ready manuscripts for publication in the Conference Transactions will be due by February 1, 1978.

U.S. BUSINESS EXPECTS ANTI-POLLUTION OUTLAYS TO RISE 11 PERCENT IN 1977

American business plans an 11-percent increase in spending this year for new plant and equipment to abate air, water, and solid waste pollution, according to a survey conducted in November and December 1976 by Commerce's Bureau of Economic Analysis (BEA).

These expenditures increased 3.3 percent in 1976 and 16.6 percent in 1975.

Planned 1977 anti-pollution spending is $7.5 billion as compared to the $6.8 billion realized in 1976. For both years, anti-pollution spending accounts for 5.6 percent of all non-farm spending for new plant and equipment reported in the same survey.

The BEA estimates are not adjusted for price changes. Capital goods prices rose 4.6 percent in 1976. If prices of pollution abatement goods behaved similarly, then real spending by business for pollution abatement goods declined about 1 percent in 1976. If businessmen expect prices to rise at the same rate this year, then their plans indicate a real increase of 6½ percent.

Industry pattern

Six industries account for $5.9 billion, or 79 percent, of the planned 1977 capital spending for pollution abatement: electric utilities ($2.3 billion), petroleum ($1.3 billion), chemicals ($0.7 billion), paper ($0.6 billion), steel ($0.6 billion), and nonferrous metals ($0.4 billion).

These same industries have accounted for the bulk of anti-pollution spending since the survey began in 1973.

Among the industries the largest increases are planned by non-electrical machinery, 69 percent; motor vehicles, 66 percent; mining, 51 percent; steel, 34 percent; and electric utilities, 18 percent.

The largest decrease is planned by electrical machinery, 19 percent.

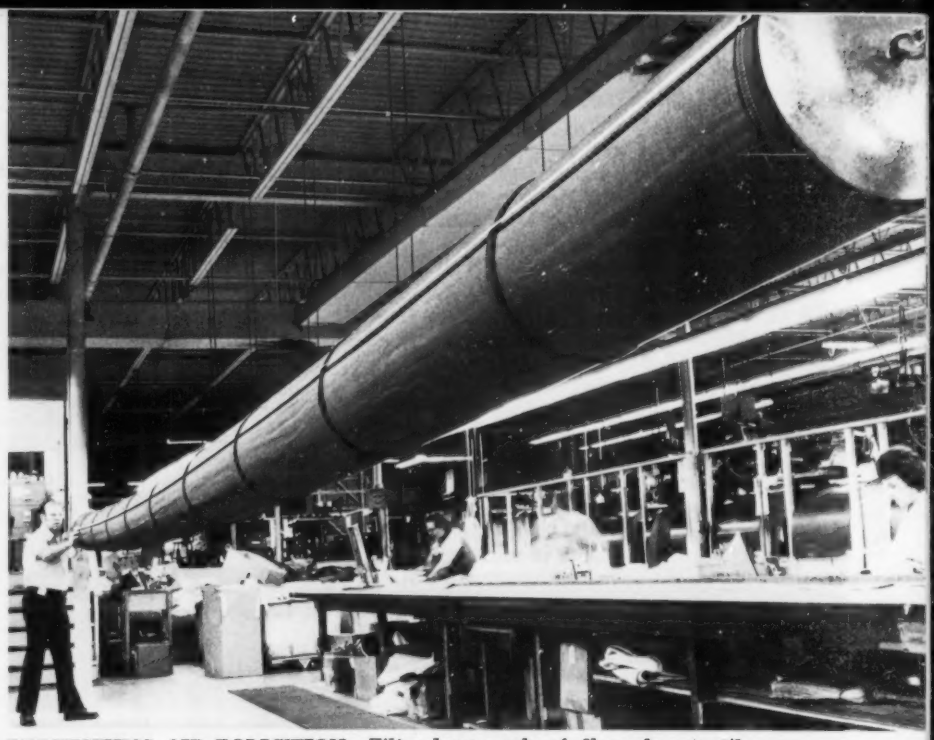
Six industries spent more than 10 percent of their total plant and equipment investment for pollution abatement in 1976: nonferrous metals (19 percent), steel (15 percent), paper (15 percent), chemicals (11½ percent), petroleum (11 percent), and electric utilities (10½ percent).

All of these, except petroleum, plan to allocate 10 percent or more of their overall 1977 capital spending to pollution abatement.

Business has spent more for air pollution abatement than for water each year since 1973. However, the difference has narrowed since 1974. The 1977 plans show 51 percent will be spent for air, 42 percent for water, and 7 percent for solid waste.

Information on both capital and operating costs for pollution abatement and control by business, government, and consumers is presented in the recently released February issue of *Survey of Current Business*.

The *Survey* is available from District Offices of the Department of Commerce, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at an annual subscription price of $19; single copy $1.60.



PREVENTING AIR POLLUTION—*Filter bags made of fiber glass textile yarn are used to trap high-temperature (above 500° F) dry dust and fume particles in the cement, steel, chemical and carbon black industries. Exhaust gases are blown through the bags, located in "bag houses," the air flow is reversed, and the dust falls into hoppers. This bag is being checked at factory under prescribed tension.*

Tourism Research Publications Listed

Market research and analysis is conducted by specialists of Commerce's United States Travel Service (USTS) to determine where resources should be expended in promoting tourism to the United States. Many of these reports are available to the public.

USTS has prepared *A Bibliography of USTS Research Publications* listing nearly 40 publications on international travel volume, international traveler characteristics, specific market research and economic data. Studies are available on Mexicans, Canadians, Germans, Brazilians, the British, the Japanese and the French. Most of the reports are free; top price of the remainder is $3.00.

The Bibliography is available without charge from: Research & Analysis Division, USTS, U.S. Department of Commerce, Washington, D.C. 20230.

Industrial Diamond Use At Record Levels In U.S.

U.S. industries consumed record amounts of industrial diamonds in 1975, according to a recently-released report.

The increase of approximately 10 percent from 1972, when Commerce's Bureau of Domestic Commerce issued a similar report, primarily reflects a sharp rise in diamond usage in drill bits and reaming shells used for geological exploration.

Use of crushing bort, grit and powder rose to 17.3 million carats in 1975 from 16.1 million in 1972, while use of industrial diamond stones rose to 2.9 million carats from 2.3 million.

Of the total, synthetic diamonds made up 63 percent; natural diamonds 24 percent, and reclaimed diamonds 13 percent.

In addition to drill bits and reaming shells which accounted for 65.4 percent, tools accounted for 22.5 percent of industrial diamond stones consumed; phonograph needles, 3.1 percent; grit tools, 3.4 percent, and others, 5.6 percent.

Industrial diamond in general is used where high tolerance must be achieved in finishing and when very hard materials must be cut. Diamond grinding wheels are used to expose fresh surfaces on glazed wheels and to restore cutting action.

Free copies of the 15-page report are available from the Publications Sales Branch, Room 1617, U.S. Department of Commerce, Washington, D.C. 20230.

PERSONAL INCOME GAP BETWEEN STATES CLOSED A BIT DURING 1975-76

Although Alaska kept getting richer, most of the poorer states stopped getting poorer in 1976, according to Commerce's Bureau of Economic Analysis.

State per capita personal income in 1976 ranged from $10,178 in Alaska to $4,575 in Mississippi, compared with the U.S. average of $6,441.

Although ranking 50th, Mississippi's per capita income grew faster (12¼ percent) than that of all but two other states: Michigan (13½ percent) and 44th-ranked Maine (12½ percent). Furthermore, the per capita incomes in 17 of the 25 states in the bottom half of the rankings grew faster than the national average of 9.1 percent between 1975 and 1976, and another equalled the national pace. So, except for Alaska's pipeline-induced prosperity which has pulled it far ahead of the pack, the income disparities between the richer and poorer states appear to be narrowing.

Bunched closely behind Mississippi in growth rate were South Carolina, New Hampshire, Utah, Kentucky, Wisconsin and Texas, whose per capita incomes all gained around 11 percent in 1976.

The smallest gains were registered in Nebraska (2¼ percent), Montana (3 percent), Hawaii (4¾ percent), and Minnesota, Connecticut, and Iowa (up about 6 percent each). Reflecting sharp declines in farm income, per capita income was off 6½ percent in North Dakota and 2½ percent in South Dakota.

Nationally, per capita income increased 9.1 percent, compared with a 5 percent increase in consumer prices.

States with high per capita incomes are concentrated in the Northeast and Far West, while those with the lowest are generally located in the Southeast. In 13 states, per capita income topped the U.S. average by 4½ to 58 percent. In 15 states, per capita income trailed the national average by 15 to nearly 30 percent.

The longer view

Total U.S. personal income increased 18 percent from the business cycle trough in the first quarter of 1975 to the fourth quarter of 1976. This resulted in a real income increase of nearly 9 percent, as consumer prices increased somewhat more than 9 percent. In all states except North Dakota and South Dakota, where farm income dropped sharply, the gain in current-dollar income exceeded the national increase in consumer prices by at least 4 percent.

Of the fast-growing states, nine are in the West (Alaska, Wyoming, Idaho, Nevada, Utah, New Mexico, Texas, Oregon, and Arizona) and three in northern New England (Maine, New Hampshire, and Vermont); Michigan and South Carolina are the others. Twelve of these states accounted for 1 percent or less apiece of the national total; Texas had 5½ percent and Michigan 4½ percent.

The fast-growing states had income gains ranging from 32½ to 21 percent, and their average gain of 23½ percent exceeded the national average by more than 5 percent. Wages and salaries in manufacturing and contract construction increased rapidly in most of these. Except for Michigan and South Carolina, manufacturing is of average or below-average importance among the faster-growing states. Service-type industries were strong in all states except Michi-

State Personal Income

	TOTAL PERSONAL INCOME MILLIONS OF $ 1975	1976	% CHANGE 1975-76	PER CAPITA INCOME $ 1975	1976	% CHANGE 1975-76	% OF NATIONAL AVERAGE IN '76	RANK
United States	**1,257,535**	**1,382,457**	**9.9**	**5,903**	**6,441**	**9.1**	**100**	
New England	*74,106*	*80,536*	*8.7*	*6,080*	*6,590*	*8.4*	*102*	
Connecticut	21,558	22,981	6.6	6,965	7,373	5.9	114	3
Maine	5,070	5,762	13.6	4,785	5,385	12.5	84	44
Massachusetts	35,290	38,251	8.4	6,066	6,585	8.6	102	14
New Hampshire	4,396	4,912	11.7	5,375	5,973	11.1	93	30
Rhode Island	5,457	6,021	10.3	5,888	6,498	10.4	101	16
Vermont	2,337	2,610	11.7	4,962	5,480	10.4	85	37
Mideast	*274,290*	*297,897*	*8.6*	*6,430*	*6,975*	*8.5*	*108*	
Delaware	3,906	4,244	8.6	6,745	7,290	8.1	113	5
Maryland	26,469	29,161	10.2	6,459	7,036	8.9	109	9
New Jersey	49,135	53,327	8.5	6,716	7,269	8.2	113	6
New York	118,953	128,397	7.9	6,564	7,100	8.2	110	8
Pennsylvania	70,276	76,699	9.1	5,941	6,466	8.8	100	18
Great Lakes	*251,116*	*278,076*	*10.7*	*6,128*	*6,793*	*10.9*	*105*	
Illinois	75,703	83,459	10.2	6,792	7,432	9.4	115	2
Indiana	30,042	33,175	10.4	5,656	6,257	10.6	97	24
Michigan	56,490	63,678	12.7	6,169	6,994	13.4	109	10
Ohio	62,747	68,759	9.6	5,832	6,432	10.3	100	20
Wisconsin	26,134	29,006	11.0	5,674	6,293	10.9	98	22
Plains	*96,582*	*103,022*	*6.7*	*5,788*	*6,130*	*5.9*	*95*	
Iowa	17,437	18,478	6.0	6,076	6,439	6.0	100	19
Kansas	13,706	15,003	9.5	6,046	6,495	7.4	101	17
Minnesota	22,835	24,394	6.8	5,817	6,153	5.8	96	27
Missouri	26,146	28,693	9.7	5,490	6,005	9.4	93	29
Nebraska	9,413	9,690	2.9	6,106	6,240	2.2	97	26
North Dakota	3,680	3,474	−5.6	5,781	5,400	−6.6	84	41
South Dakota	3,364	3,290	−2.2	4,924	4,796	−2.6	74	49
Southeast	*241,378*	*267,060*	*10.6*	*5,054*	*5,544*	*9.7*	*86*	
Alabama	16,799	18,711	11.4	4,648	5,105	9.8	79	47
Arkansas	9,770	10,700	9.5	4,617	5,073	9.9	79	48
Florida	47,069	51,434	9.3	5,640	6,108	8.3	95	28
Georgia	24,981	27,691	10.8	5,072	5,571	9.8	86	35
Kentucky	16,590	18,588	12.0	4,886	5,423	11.0	84	39
Louisiana	18,555	20,689	11.5	4,895	5,386	10.0	84	43
Mississippi	9,568	10,771	12.6	4,079	4,575	12.2	71	50
North Carolina	26,833	29,582	10.2	4,922	5,409	9.9	84	40
South Carolina	13,006	14,599	12.2	4,615	5,126	11.1	80	46
Tennessee	20,559	22,894	11.4	4,909	5,432	10.7	84	38
Virginia	28,732	31,581	9.9	5,786	6,276	8.5	97	23
West Virginia	8,916	9,822	10.2	4,946	5,394	9.1	84	42
Southwest	*100,503*	*112,902*	*12.3*	*5,486*	*6,040*	*10.1*	*94*	
Arizona	11,822	13,208	11.7	5,316	5,817	9.4	90	31
New Mexico	5,467	6,089	11.4	4,768	5,213	9.3	81	45
Oklahoma	14,263	15,650	9.7	5,259	5,657	7.6	88	33
Texas	68,951	77,956	13.1	5,635	6,243	10.8	97	25
Rocky Mountain	*31,738*	*35,124*	*10.7*	*5,585*	*6,072*	*8.7*	*94*	
Colorado	15,200	16,797	10.5	5,998	6,503	8.4	101	15
Idaho	4,248	4,756	12.0	5,177	5,726	10.6	89	32
Montana	4,062	4,215	3.8	5,433	5,600	3.1	87	34
Utah	5,954	6,731	13.0	4,938	5,482	11.0	85	36
Wyoming	2,274	2,625	15.4	6,079	6,723	10.6	104	13
Far West	*187,822*	*207,838*	*10.7*	*6,487*	*7,048*	*8.6*	*109*	
California	139,388	154,173	10.6	6,596	7,164	8.6	111	7
Nevada	3,950	4,475	13.3	6,673	7,337	10.0	114	4
Oregon	13,163	14,743	12.0	5,752	6,331	10.1	98	21
Washington	22,292	24,458	9.7	6,284	6,772	7.8	105	12
Alaska	3,355	3,888	15.9	9,535	10,178	6.7	158	1
Hawaii	5,674	6,101	7.5	6,658	6,969	4.7	108	11

Where Gains Came From

(Percent changes in personal income, 1st quarter 1975 to 4th quarter 1976)

	TOTAL CHANGE %	FARM	WAGES AND SALARIES MANUFAC-TURING	WAGES AND SALARIES CONTRACT CONSTRUC-TION	WAGES AND SALARIES SERVICE INDUS-TRY	CHANGE AS % OF AVERAGE NATIONAL	% OF TOTAL U.S.
United States	**18.1**	**6.4**	**17.7**	**4.5**	**18.7**	**100**	**100.0**
Fast-Growing States							
1 Alaska	32.6	15.7	16.3	88.2	39.6	180	.2
2 Wyoming	24.4	102.3	13.0	−4.5	20.6	135	.2
3 Idaho	24.0	10.0	34.3	4.7	25.5	133	.3
4 Michigan	23.5	−24.1	39.0	4.4	17.3	130	4.5
5 Maine	23.5	103.6	22.9	46.2	21.2	129	.4
6 Nevada	23.3	43.5	30.7	46.4	25.5	129	.3
7 Utah	23.1	20.1	14.6	36.9	27.8	128	.5
8 New Mexico	22.7	28.9	23.6	12.3	28.7	125	.4
9 Texas	22.6	86.6	20.4	24.5	22.4	125	5.4
10 Oregon	22.6	33.3	29.7	13.7	24.3	124	1.0
11 South Carolina	22.1	19.9	41.9	−.1	22.1	122	1.0
12 New Hampshire	21.9	19.9	27.4	29.9	27.1	121	.3
13 Arizona	21.3	82.9	22.5	−6.6	24.1	118	.9
14 Vermont	21.3	78.3	17.6	10.3	22.2	117	.2
Average	*23.5*	*44.4*	*25.3*	*21.9*	*24.9*	*130*	*1.1*
Near-Average Growing States							
15 Colorado	20.9	−24.0	12.6	15.6	25.8	115	1.2
16 Mississippi	20.7	27.5	26.1	6.5	22.3	114	.8
17 Alabama	20.6	19.9	24.4	4.0	22.0	114	1.3
18 Kentucky	20.3	25.5	21.1	16.9	20.3	112	1.3
19 Georgia	20.0	26.6	29.7	−1.5	18.3	110	2.0
20 Tennessee	19.7	53.7	21.7	−3.6	19.8	109	1.6
21 Oklahoma	19.5	−20.8	21.8	2.7	20.4	107	1.1
22 Louisiana	19.4	−36.5	18.9	30.7	20.1	107	1.5
23 Washington	19.3	−29.9	17.0	25.7	24.9	106	1.8
24 California	19.3	30.5	16.1	9.3	20.7	106	11.1
25 North Carolina	19.0	2.0	30.8	3.8	18.3	105	2.1
26 Wisconsin	19.0	9.9	15.4	19.1	21.9	105	2.1
27 Rhode Island	18.6	15.4	21.4	4.1	19.1	103	.4
28 Indiana	18.5	28.8	20.4	.8	19.8	102	2.4
29 Kansas	18.5	−2.8	13.7	23.4	22.6	102	1.1
30 Virginia	18.4	−8.0	20.1	3.2	20.7	101	2.3
31 Missouri	18.3	1.1	18.7	20.8	18.6	101	2.1
32 Maryland	18.1	4.0	20.8	3.4	18.6	100	2.1
33 West Virginia	17.9	−57.3	11.7	−4.1	16.6	99	.7
34 Illinois	17.7	5.1	16.3	−.4	15.7	98	6.0
35 Florida	17.1	17.5	15.4	−17.3	17.5	94	3.8
Average	*19.1*	*4.0*	*19.2*	*6.8*	*20.1*	*105*	*2.2*
Slow-Growing States							
36 Pennsylvania	16.5	9.2	8.9	−3.8	18.6	91	5.6
37 Ohio	16.5	15.1	13.6	.3	17.4	91	5.0
38 Arkansas	16.3	−21.7	27.5	8.9	22.0	90	.8
39 Delaware	16.0	6.8	13.5	.3	16.2	88	.3
40 Massachusetts	15.9	8.8	14.5	−17.8	15.5	87	2.8
41 Iowa	15.5	−7.8	6 8	16.5	23.5	85	1.3
42 Minnesota	15.5	−42.3	15.7	8.7	20.7	85	1.8
43 Montana	15.1	−30.9	26.7	−.2	21.6	83	.3
44 New Jersey	14.6	33.9	10.2	−13.2	15.7	80	4.0
45 Hawaii	14.1	−13.9	5.0	−18.4	18.2	78	.5
46 New York	13.8	30.8	8.9	−19.5	12.0	76	9.6
47 Nebraska	13.7	−31.7	14.0	23.1	22.7	75	.7
48 Connecticut	13.0	22.3	6.4	−15.6	14.2	72	1.7
49 South Dakota	7.4	−64.6	12.9	−.7	21.7	41	.3
50 North Dakota	3.2	−64.0	5.7	2.9	26.9	17	.3
Average	*13.8*	*−10.0*	*12.7*	*−1.9*	*19.1*	*76*	*2.3*

gan, where the rebound in automobile production accounted for the entire above-average gain. Gains in farm income were of significance only in Texas, Arizona, and Vermont.

Of the 15 slower-growing states, seven are major agricultural producers: North Dakota, South Dakota, Nebraska, Montana, Minnesota, Iowa, and Arkansas. In these states the average gain in personal income fell short of the national average by 6 percentage points. Farm income (which accounts for 11½ percent of their total income, compared to only 2¼ percent nationally) fell nearly 40 percent; by comparison, the nation's farm income increased more than 6 percent.

The decline in farm income in these states was due to a sharp decline in prices from an unusually high first-quarter 1975 level—especially for wheat, corn, and hogs—and an increase in production expenses. South Dakota, in addition, suffered a severe drought that cut production. The gain in nonfarm income in these states exceeded the national average by 4 percent.

In the eight slow-growing non-agricultural states, the average gain in personal income fell short of the national average by 3 percentage points. Only slight gains were registered in all major non-farm income components. Wages and salaries in manufacturing, accounting for 22 percent of total income in all of these states except Hawaii (as compared with 17 percent in the nation), increased less than 11 percent, well under the 17¾-percent national gain. Wages and salaries in contract construction were down in six states and unchanged in two. Wages and salaries in service-type industries were weak in all eight states except Pennsylvania and Hawaii, where gains approached the national average.

The state personal income estimates in the accompanying tables do not reflect the major, comprehensive revisions of the national income and product accounts announced Jan. 16, 1976. Apparent discrepancies between the percentage of change in the two tables reflect the different time periods reported on: the table at left shows the gains during calendar year 1976, while the one at right gives the change from the beginning of 1975 to the end of 1976.

Detailed quarterly personal income data for each individual state are available from BEA's Robert B. Bretzfelder at 202-523-0948.

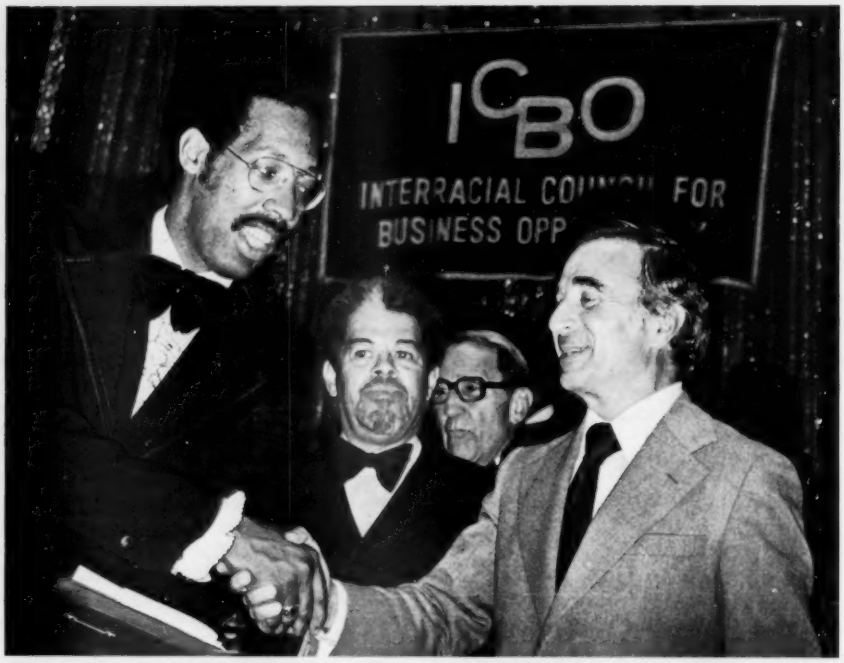
Directory Aids In Choosing Management Consultants

Need a management consultant? A new directory from Consultants News lists more than 430 firms by services offered, industries served and geographic location.

The *Directory of Management Consultants* contains, in addition to basic data on name, address, telephone number, key contact and branch offices, information on firm size by number of consultants and by billings.

The 84 listed industries served are based on the U.S. Standard Industrial Classification (SIC) numbers. Information is also included on leading consulting associations, how to select a management consulting firm, the importance of professional affiliations, and other factors of interest.

The book is available from Consultants News, 17 Templeton Rd., Fitzwilliam, N.H. 03447, priced at $37.50.



OUTSTANDING MINORITY BUSINESS—*National Black Network (NBN) founder and president Eugene D. Jackson (left) is congratulated by Sidney Harman, Under Secretary of Commerce, on receiving the 1977 Minority Business Achievement Award of the Interracial Council for Business Opportunity (ICBO) at its annual national dinner in New York recently. ICBO recognized NBN for its "outstanding contribution to the black community and its unique access to the black consumer market as the first line-connected, nation-wide, black-owned radio network in the nation." Looking on (center) is Malcolm L. Corrin, ICBO president. ICBO is funded by Commerce's Office of Minority Business Enterprise as a Business Development Organization to provide management and technical assistance to minority firms.*

Threatened Tourship Gets Help From Satellites Via Ham Operators Worldwide

Eighty persons on a round-the-world cruise aboard a chartered motor sailor recently underwent an experience in the Pacific Ocean with all the ingredients of a first-rate, cliff-hanging disaster yarn.

Fortunately, this yarn has a happy ending, thanks to a spontaneously-formed network of Good Samaritans spread across the globe.

The 60 passengers and 20-man crew of the motor sailor Yankee Trader, threatened by a near-hurricane-sized tropical storm, were guided to safety by ham radio operators from two continents, with information provided by satellite meteorologists at various Commerce Department stations around the country.

The drama at sea occurred when the 176-foot Yankee Trader, a day out of *Mutiny On The Bounty's* Pitcairn Island, sailed into the center of a tropical storm 200 miles wide and with winds up to 75 miles an hour.

Seeking weather information to plot a course to safety, the ship put out a call on short wave radio, and was answered by ham radio operators in New Zealand and Chicago. Neither, however, had access to weather information for the Yankee Trader's area of the South Pacific.

But Donald M. Dibble, a ham radio operator in Mission Hill, Kan., overheard the three-way conversation. He contacted the National Oceanic and Atmospheric Administration's Kansas City satellite field services station.

"I inquired as to whether they had, or could obtain, a forecast for that area, or a satellite picture," Dibble said.

"They said they normally only had satellite pictures of the Northern Hemisphere, but that they would try to get a weather forecast for me. I held on for a short time while they contacted Weather Service offices in San Francisco and Washington, D.C., both of which were watching the storm on satellite imagery.

"From these, they were able to give me the coordinates for the center of the storm, as well as its direction of travel and size. They also gave me a recommended course of travel for the ship to follow to steer clear."

Armed with this information, Dibble went on the air to try to reach the Yankee Trader. But the drama was not quite played out . . . He was unable to raise the ship.

Atmospheric conditions do strange things with radio waves, and Dibble found that while he could contact the New Zealand ham, 1,500 miles further west, he could not talk to the ship which, minute by minute, was sailing deeper into peril.

Dibble passed the weather information along to the New Zealand operator whose call to the Yankee Trader went unanswered. The Chicago ham, listening in, offered to try to reach the ship. Again, failure. At this point yet another ham radio operator, in Florida, broke into the conversation to report he was in contact with the Yankee Trader.

Thus, the information which originated with a NOAA satellite 22,200 miles (35,720 kilometers) in space went from Kansas City to New Zealand to Chicago to Florida to the South Pacific.

Upon receipt of the weather data and course advisory, the Yankee Trader took a new heading and sailed into calmer waters, its passengers shaken but safe.

Chartered by Windjammer Barefoot Cruises, Ltd., of Miami, the Yankee Trader had left Florida about three months ago on a ten-month cruise.

Vital Statistics Covered In Pocket Data Book

There has been a lot of discussion recently about the size of the Federal Government payroll. Taking an historical perspective, the number of federal employees has indeed grown: In 1816, there were some 5,000 civilian employees; in 1975, the number was nearly 2.9 million. These and other interesting statistics are included in the latest *Pocket Data Book USA 1976* from Commerce's Bureau of the Census.

The book is the fifth in a series begun in 1967. It contains updated, condensed tables on virtually all the subjects covered in the Bureau's *Statistical Abstract of the U.S.: 1976,* published several months ago. These include the country's and the world's population, vital statistics, immigration, government, elections, national defense and veterans, and many other subjects.

The *Pocket Data Book* may be purchased for $4 a copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or from Commerce district offices in major cities.

The historical statistics are also excerpted in a separate brochure, *Bicentennial Statistics,* available for 90 cents from the same addresses. Order forms for both publications may be obtained from Subscriber Services (Publications), U.S. Bureau of the Census, Washington, D.C. 20233 (301-763-7424).

U.S. Sugar, TV Industries, Hit By Imports, May Qualify For Special Assistance

Commerce may help nurse two wounded industries back to health.

Parts of two American industries—sugar growing/processing and television manufacturing—are threatened by imports and may be eligible to apply for federal trade adjustment assistance, according to special reports submitted to the President by the Department.

The reports present the results of studies conducted after a determination by the U.S. International Trade Commission that increased imports represent a threat of serious injury to the two domestic industries.

The Commerce investigators reviewed the effects of imports for:

- The domestic growers and processors of sugar cane and sugar beets, and,
- Domestic producers of television receivers and subassemblies.

For each industry, the Commission recommended that import quotas be established to relieve the threats.

Concerning the domestic sugar industry, the Commerce report says that independent growers may be the first to apply for certification for assistance. It added that all operations of sugar cane millers and sugar beet processors would have to be reviewed to determine whether requirements for certification can be met. Sugar cane refiners are the least likely to qualify for certification under the trade program, the report added.

The television industry report states that two firms producing receivers appear to meet the criteria of absolute declines in either total sales or total production and employment due to competition from imports. It added that firms manufacturing components or subassemblies for television receivers must establish that imports have increased and have contributed importantly to their declines.

To be certified to apply for adjustment assistance a firm must demonstrate that increased imports of like or directly competitive articles have contributed importantly to declines in sales or production, or both, and separation, or threat of separation, of the firm's workers.

Petitions for certification can be submitted to the Department's Economic Development Administration (EDA). After a firm is certified, it can apply for adjustment assistance under a program designed to assist trade-impacted businesses.

Two types of assistance—technical and financial—are authorized by the Trade Act of 1974, provided a firm develops an acceptable proposal for its economic recovery and meets all the criteria of the statute.

Firms also may benefit from financial assistance available to trade-impacted communities under other programs administered by EDA. They include special economic development and adjustment assistance to solve problems caused by real or threatened high unemployment.

Two other federal agencies—the Farmers Home Administration and the Small Business Administration—also have programs that could provide trade adjustment assistance to sugar growers and processors, the report added.

Feed Manufacturers Report Strongest Energy Use Cuts

U.S. feed manufacturers cut their use of energy per unit of output more sharply in the first three quarters of 1976 than any of the 12 industries which submitted quarterly reports to the Department of Commerce under the Voluntary Industrial Energy Conservation Program. A total of 39 industry groups are full participants in the program.

Feed manufacturers use of Btu's was nearly 26 percent per unit of output below the same period in 1972. Tile producers cut energy use nearly 20 percent; brick manufacturers, 18 percent; motor vehicle manufacturers, 10 percent; and gypsum producers, 7 percent.

A report prepared by Commerce's Office of Energy Programs and FEA's National Energy Conservation Program presents comprehensive data on 12 industries. Time periods and base periods for comparison vary.

Despite the differences in reporting periods, the report clearly demonstrates that U.S. industry is making a consistent and successful voluntary energy conservation effort.

Other savings were recorded by the baking industry, where energy use per unit of output in the first half of 1976 was more than 16 percent below the first half of 1972; die casters, who cut energy use by more than 16 percent in a single year, and rubber manufacturers, whose energy use declined by more than 6 percent between June 30, 1972 and June 30, 1976.

Commerce's Office of Energy Programs works with industry groups to develop energy conservation programs featuring voluntary energy conservation reporting. Under the industrial conservation program of the Energy Policy and Conservation Act, companies that are full participants in a voluntary program are exempt from making individual mandatory reports to the government.

Copies of the report, *Voluntary Industrial Energy Conservation, An Update of Progress Report 4*, are available from the Office of Energy Programs, Room 2203, U.S. Department of Commerce, Washington, D.C. 20230.

Energy Shortage Spurs Drive For Productivity

The U.S. energy situation has lent an added sense of urgency to the nation's drive to increase its productivity. This was a recurring theme at a recent Washington seminar featuring productivity specialists from the private sector, ranking government officials and a member of Congress.

George Kuper, executive director of the National Center for Productivity and Quality of Working Life, pointed out that productivity used to be improved by substituting energy for labor. Now that equation is no longer valid, he said, and new gains will have to come from improved management techniques as well as making workers happier by creating a better work atmosphere.

Congressman Stanley N. Lundine of New York called for governmental agencies to pay more attention to effective planning in the area of energy conservation, and make a special effort to reduce the business inefficiencies caused by their reporting requirements. The author of the proposed Human Resources Development Act of 1977, which is designed to grapple with the productivity problem, Rep. Lundine proposed that the government role be more carefully crafted. That is, for instance, not issuing directives without assessing their long-term ramifications.

Commerce Under Secretary Sidney Harman, who was an active productivity innovator at his own firm before assuming his present job, said that productivity should be a by-product of a work improvement program, rather than its primary goal.

Actively seeking ideas

He attributed much of the successful employee-management relations at Harman International to actively soliciting ideas from employees, rather than relying on a suggestion box.

He told how the firm's methods engineers went out onto the factory floor and talked with the workers doing the jobs, asking what they would do to improve their work efficiency. This produced much better results than simply sending the engineer out to time the duration of each task with a stopwatch.

Fred Rudge, author of *Key to Increased Productivity: A Manual for Line Executives*, published by BNA Books, calls credibility the "Achilles Heel" of the private sector in its efforts to increase productivity. However, he cites a recent poll showing enormous public support for the free enterprise system, and says the current anti-business attitude is based on specific, correctable factors rather than a distrust of the system.

State-Local Government Pension Funds' Benefits, Reserves At Record Levels

Business is booming for state and local government employee pension funds.

These retirement systems throughout the country paid out $8.4 billion in benefits and withdrawals during fiscal 1975-76, an increase of $900 million over the previous year, according to Commerce's Bureau of the Census.

However, that amount was more than $13 billion less than they took in, as their receipts totaled $21.6 billion during fiscal 1975-76, $2.7 billion more than the previous year. Their overall assets totaled $111.5 billion by the end of the fiscal year.

Total state and local government retirement receipts of $21.6 billion came from employee contributions, $4.8 billion; state governments, $4.7 billion; local governments, $5.8 billion, and earnings on investments, $6.3 billion.

Payments during fiscal 1975-76 included $7.5 billion for benefits and $915 million for withdrawals (mainly lump sums returned to members leaving the systems before retirement).

Both membership and the financial scale of state and local retirement systems have grown considerably in the past decade. Membership increased by 28 percent from 1967 to 1972, from 7.1 million to 9.1 million employees. Their financial scale went up even more, with annual rates of increase averaging 13.9 percent for receipts; 12.8 percent for benefit and withdrawal payments; and 11.9 percent for cash and security holdings.

The report also shows a continued high proportion of retirement system investment in non-governmental securities. At the end of fiscal 1976, such holdings made up 87.6 percent of all assets in the systems. During 1974-75 the proportion was 90.5 percent, and for 1973-74 it had been 90.6 percent.

Investment in real property by the systems totaled $435.9 million at the end of fiscal 1975-76. Of that amount, almost two-thirds, or $272.4 million, were held by locally-administered systems.

Copies of the report, *Finances of Employee-Retirement Systems of State and Local Governments in 1975-76*, GF76, No. 2, are available for 85 cents from the Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233, or from Commerce District Offices in major U.S. cities.

A Rose By Any Other Name Will Be In Color Dictionary

Perhaps the average person will never need to be able to distinguish fire red from flame scarlet, or vivid green from brilliant green. But for paint manufacturers, interior designers, fabric producers, the building profession and others who have need for color information, a new publication from Commerce's National Bureau of Standards (NBS) should fill the bill.

Color—Universal Language and Dictionary of Names updates and combines two previous NBS publications, *The Color Names Dictionary* and *The Universal Color Language*. The book brings together all the well known color-order systems and methods of designating color. It is also the basic document describing the Inter-Society Color Council-NBS system of color designation.

The updated system applies not only to the colors of drugs and chemicals, for which it was originally developed in 1939, but to the colors of all opaque, clear, cloudy or fluorescent samples. The dictionary is fast becoming the common denominator for color terminology used in science, art and industry.

The book, NBS Special Publication 440, Stock Number 003-003-01705-1, may be purchased at $3.25 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Bulk orders are available at a discount. The publication may also be purchased together with the Centroid Color Charts, Order Number SRM #2107, for $18 from the Office of Standard Reference Materials, NBS, Washington, D.C. 20234.

Data Given On Shipping Hazardous Materials

A topic as current as a newspaper headline is the subject of a new book—the *Red Book on Transportation of Hazardous Materials* by Lawrence W. Bierlein.

Bierlein provides insight into the laws, the nature and organization of the regulating agencies, international regulatory bodies and a wide range of other pertinent matters. The Red Book shows the reader, step-by-step, how to go about the preparation and carriage of a hazardous material under today's regulations. It covers identification and classification of materials, selection of the proper shipping name, packaging, marking, labeling and shipping papers, among other things.

To keep the book up-to-date, the publisher will produce periodic supplements of 40-60 pages with explanation and interpretation of new laws as they take effect. Purchasers of the book will be alerted as these supplements become available.

The book, priced at $65, is available from Cahners Books International, Inc., 221 Columbus Ave., Boston, Mass 02116 (617-536-7780).

Grant To Pacific Islands Aimed At Year-Round Jobs Through Tourism Expansion

Hawaii isn't worried about getting too much of a good thing. The 50th state, along with the territories of American Samoa and Guam, has applied for and received a $75,000 technical assistance grant from Commerce's Economic Development Administration to help expand tourism.

The grant, to the Pacific Islands Development Commission, Inc., will be used to help pay the costs of a series of studies that will guide the preparation of a five-year tourism development program. The studies will:

- Consider the general effectiveness of existing tourism programs;
- Review problems of each island group;
- Recommend solutions to the problems and make recommendations for expanding tourism; and
- Consider opportunities for cooperative planning and development by the Pacific Islands.

The goal of the tourism development program is to strengthen the economies of the islands and provide year-round job and business opportunities.

The Commission will provide $25,000 to complete the total cost of the program for a year.

World's Roofing Industry Invited To September Session

Roofing researchers and contractors from around the world will meet for the first time in the United States to exchange technical information on the science and technology of membrane roofing at a September symposium at Commerce's National Bureau of Standards.

The Symposium on Roofing Technology, jointly sponsored by NBS and the National Roofing Contractors Association, will be held Sept. 21-23 at the NBS facility in Gaithersburg, Md.

International roofing technologists will present papers dealing with materials, design, construction, and performance aspects of membrane roofiing as well as report on the latest developments in roofing applications and practices.

The opening session will consist of presentations on roofing practices throughout the world. The initial session will feature speakers from England, Sweden, Japan, Switzerland as well as the United States.

For details contact William A. Good at NRCA headquarters, 1515 North Harlem Ave., Oak Park, Ill., 60302 or William C. Cullen and Robert G. Mathey at B348 Building Research, NBS, Washington, D.C. 20234.

PRODUCTIVITY INCREASE GREATEST IN A YEAR

Productivity in the private business sector increased 3.2 percent (at a seasonally adjusted annual rate) in the first quarter of 1977, according to preliminary figures from the Bureau of Labor Statistics of the U.S. Department of Labor. The increase, the largest in a year, reflected a 6.2 percent rise in output and a 2.8 percent increase in hours of all persons engaged in the sector. In the preceding quarter, output increased 2.3 percent and hours rose 2.1 percent, so that productivity rose 0.3 percent.

Hourly compensation—which includes the hourly cost of wages, salaries, supplemental employment benefits and employer contributions to employee benefit plans—increased 10.7 percent in the first quarter, the largest such increase in two years. In the preceding quarter, these costs rose 8.2 percent. Real hourly compensation—hourly compensation adjusted for changes in the Consumer Price Index—rose 2.4 percent, compared with a 3.5 percent increase in the fourth quarter of 1976.

Unit labor cost—which reflects movements in hourly compensation and productivity—increased 7.3 percent in the first quarter, compared with an 8 percent increase in the preceding quarter.

The implicit price deflator, which shows the combined effect of changes in unit labor cost and unit nonlabor payments, increased 5.5 percent (at an annual rate) in the first quarter—the largest rise in this measure since the fourth quarter of 1975.

In the nonfarm business sector, output per hour of all persons—productivity—increased at a 2.6 percent annual rate, reflecting rises of 6.4 percent and 3.7 percent in sector output and hours, respectively. In the fourth quarter of 1976, productivity declined 1.2 percent.

Hourly compensation rose 10.2 percent, the largest quarterly rise in this series since the first quarter of 1975, compared with a 7 percent increase one quarter earlier. Real hourly compensation rose 1.9 percent, a somewhat smaller increase than the 2.3 percent rise of the previous quarter.

The implicit price deflator for the nonfarm business sector rose 4.2 percent, the smallest such increase since the second quarter of last year.

Manufacturing down slightly

In manufacturing, productivity declined 0.1 percent from the fourth quarter of 1976, as output and hours rose 4.2 percent and 4.4 percent, respectively, in the first quarter of 1977. In the preceding quarter, productivity declined 0.2 percent in manufacturing.

Because productivity declined, unit labor cost rose more than hourly compensation—11.2 percent and 11.1 percent, respectively. Real hourly compensation increased 2.7 percent, compared with a 3.2 percent increase a quarter earlier.

The small decline in manufacturing productivity resulted from opposite movements in the durable and nondurable goods-producing sub-sectors. Productivity declined in the durable manufacturing sector by 1.2 percent in the first quarter, marking the second consecutive quarterly decline in the measure. Hourly compensation rose 10.8 percent, and unit labor cost increased 12.2 percent. Real hourly compensation increased 2.5 percent.

Among nondurable goods-producing manufacturing industries, productivity increased 1.9 percent, compared with a 2 percent increase in the preceding quarter. Although the first quarter productivity increase in nondurables was larger than the decline in durables, the nondurable industries carry a smaller weight in the overall sector—nondurables account for roughly 41 percent of all hours paid for in manufacturing. Nondurable output increased 4.8 percent, and hours rose 2.9 percent, both increases being the largest in a year. Hourly compensation increased 11.2 percent and unit labor cost rose 9.2 percent. Real hourly compensation increased 2.8 percent in the first quarter.

Productivity in nonfinancial corporations declined 0.1 percent in the fourth quarter of 1976, as output rose 1.3 percent and employee-hours increased 1.4 percent. This decline was the only productivity drop in 1976. Both the rise in hourly compensation (9 percent) and the rise in unit labor cost (9 2 percent) were the largest since the first quarter of 1975, partly due to the decline in productivity. Real hourly compensation rose 4.1 percent. Unit profits were off 24.5 percent in the fourth quarter, the largest decline in two years.

Revised annual measures for 1976 as a whole show productivity in nonfinancial corporations up 3.9 percent, hourly compensation up 7.7 percent and unit profits up 23.1 percent.

Liberian-Registry Shipowners Call For Frequent Inspections

The Liberian Shipping Council has called for more frequent inspections of Liberian-registered vessels tending toward "substandard" condition in order to "virtually eliminate sub-standard ships from the Liberian registry and to prevent undesirable vessels from registering under the Liberian flag."

The Council is an organization of owners and operators of seagoing vessels registered under the Liberian flag. The group has called for establishment of a world-wide, computerized information system to provide the date each Liberian-flag ship was last inspected and a report on any significant deficiencies. The Council urged, moreover, that the Liberian Bureau of Maritime Affairs conduct inspections at least every six months, instead of the customary annual ones, in the case of vessels considered to be in or verging on sub-standard condition, with particular attention to older vessels.

Another key provision calls for a system of field audits, or spot checks, of the work of both the Bureau's own world-wide 150-member inspection force and other inspection agencies under contract with the Government.

The Task Force which prepared the report was set up by the Council in January following a series of accidents involving Liberian-flag tankers in and near U.S. coastal waters, including the grounding and break-up last December of the *Argo Merchant* off Nantucket Island, Mass. The group was headed by Jan D. Uiterwyk, executive vice president of Uiterwyk Corp., a Tampa-based international shipping company.

Serving with Uiterwyk were Hans Proeller, Fritzen-Halcyon Lijn, New York; T. Donald Kehoe, Exxon Internations, Florham Park, N.J.; Captain Nicholas M. Lygnos, Kalmibes Management, New York; Captain Kenneth J. Fullwood, Mobil Shipping & Transportation Co., New York; and Capt. K. J. Liu, Maritime Industries Agencies, New York.

Skills For Managers Taught In AMA Courses

Improving managerial skills of the new or prospective manager is the subject of a series of seminars being conducted around the country by the American Management Associations.

Sessions are scheduled in June in Houston, the San Francisco area, Seattle and New York; in July in Chicago, New York, the Minneapolis area, Atlanta, Kansas City and San Francisco; in August in New York, Boston, Chicago, Atlanta, Denver and Dallas; and in other cities in September and October.

Among the topics stressed: how to delegate and still keep control; how to manage time for maximum results; techniques for making better decisions; motivating employees; and how to develop a more effective interpersonal style.

For further information, contact: American Management Associations, 135 West 50th St., New York 10020 (212-586-8100).

Alcohol From Farm Products Could Help Solve Energy Crisis And Aid Minority Farmers

If you drink, don't drive; but you may be able to give your car a nip or two if a research project sponsored by Commerce's Office of Minority Business Enterprise pans out. And the nation's energy problem could be one step nearer to a solution.

Dr. Randolph T. Blackwell, who has been nominated to head OMBE, says the agency is working with other governmental units to determine the feasibility of producing methanol and ethanol—alcohols suitable to fueling the internal combustion engine—from biomass sources such as farm crops.

The use of alcohol as a fuel is not new. Alcohols have been substituted for petroleum when it was in short supply. A minor adjustment in the standard internal combustion engine permits the use of alcohol fuel in automobiles, tractors and other farm equipment. With the rising cost of petroleum and concern about the environment, interest in alcohol fuel is reviving.

"Care must be taken not to cavalierly raise the hopes of people," Dr. Blackwell said, "but this *does* hold out the possibility of running entire farms and small communities without using a single drop of gasoline."

He said this development could be particularly significant to the minority enterprise program, considering the thousands of acres of land owned by mostly poor minorities, particularly in the Southeast. He said the possibilities of alcohol technology, if found to be sound, are boundless.

Dr. Blackwell says the big question is, "is it practical in terms of cost? We don't know," he responds to his own question, 'but we certainly intend to find out. Particularly because of the attractive advantages that the success of such a program holds out in terms of new enterprise possibilities for minorities."

Calendar Of Business Events

June 9—Paducah, Ky.—Metric Workshop, Chamber of Commerce. Contact: Commerce Memphis District Office.

June 10—Saratoga Springs, N.Y.—Federal Procurement Conference, Holiday Inn. Sponsors: U.S. Reps. Ned Pattison, Sam Stratton & Hamilton Fish. Contact: Barbara Jones, c/o Rep. Pattison, 33-2nd St., Troy, N.Y. 12180 (518-274-2958).

June 12-15 — Atlantic City — Mid-Year China Glass & Gift Show, Convention Ctr. Contact: Irene Weissman, Little Shows, 261 Madison Ave., New York 10016 (212-986-4700).

June 12-16 — Washington — American Assn. of Petroleum Geologists Convention, Sheraton Park & Shoreham Americana Hotels. Contact: Pat Jordan (202-393-1300).

June 13-14—San Francisco—New Products Seminar, Holiday Inn Golden Gateway. Sponsor: N.Y.U. Contact: Heidi Kaplan, N.Y. Mgt. Ctr., 360 Lexington Ave., New York 10017 (212-953-7262).

June 13-14—Los Angeles—Effective Production Planning & Inventory Mgt., Hyatt Regency. Sponsor: The Wharton School. Contact: Heidi Kaplan, see address above.

June 13-16—Dallas—1977 National Computer Conference, Convention Ctr. Contact: Carol Sturgeon, American Federation of Information Processing Societies, Inc., 210 Summit Ave., Montvale, N.J. 07645 (201-391-9810).

June 13-16—Austin, Tex.—Air-Pollution-Control Technology, University of Texas. Contact: Dr. Hal Cooper, Dept. of Civil Engineering, U.T. at Austin, Univ. Station, Austin, Tex. 78712.

June 14-15—Boston—New Directions in Mfg. Management, Phase II—Implementation, Sheraton-Boston Hotel. Contact: American Institute of Industrial Engineers, P.O. Box 1710, Long Beach, Calif. 90801 (213-437-7465).

June 15-17—New York—Cryogenic Technology for the Petrochemical Industry, Barbizon Plaza Hotel. Sponsor: N.Y.U. Contact: Heidi Kaplan, see address above.

June 15-17 — Philadelphia — Financial & Managerial Accounting for the Non-Financial Manager, Drexel U. Contact: Director, Continuing Professional Education, Drexel U., 32nd & Chestnut Sts., Philadelphia, Pa. 19104 (215-895-2154).

June 16—Los Angeles—UCLA Business Forecasting Conference, Freud Playhouse. Contact: 213-825-1623 or 213-825-7613.

June 17—Houston—Gov't & Industry Use of Census Bureau GBF/DIME File, Houston-Galveston Area Council. Contact: Marjorie Turner at the Council, 3701 W. Alabama, Houston, Tex. 77027 (713-627-3200).

June 20—New York—Energy Mgt. Systems, St. Regis Hotel. Sponsor: Metropolitan Assn. of Urban Designers. Contact: MAUDEP, P.O. Box 722, Church St. Station, New York 10008.

June 20-21—Kingston, R.I.—U.S. Coastal Belt: Conflict Resolution & Promise, U. of R.I. Contact: Center for Ocean Mgt. Studies, 19 Upper College Rd., U. of R.I., Kingston, R.I. 02881.

June 20-22—Minneapolis—Quality Audit —Development & Administration, Holiday Inn-Downtown. Sponsor: American Society For Quality Control. Contact: ETI Registrar, Dept. 500, ASQC, 161 W. Wisconsin Ave., Milwaukee, Wis. 53203 (414-272-8575).

June 24 — Raleigh, N.C. — Federal Procurement Conference, Royal Villa Convention Ctr. Sponsor: Sen. Robert Morgan. Contact: Jean Joyner, c/o Sen. Morgan, P.O. Box 2719, Century Post Office, Raleigh, N.C. 27602 (919-755-4236).

June 27-July 1—Chicago—Hazard Prevention Symposium, Institute of Gas Technology. Contact: Kathy Fisher, IGT, IIT Ctr., 3424 S. State St., Chicago, Ill. 60616 (312-567-3881).

Computer Networks Symposium Seeks Papers

Computer experts please apply.

Sponsors of a Dec. 15 symposium on computer networks at Commerce's National Bureau of Standards in Gaithersburg, Md., are calling for papers to be delivered at the event.

Submitted papers should be of a tutorial nature, describing practical results with computer networks and networking systems or presenting new research results. Topics to be covered include: multi-computer networks, value-added networks, terminal-oriented networks, network design techniques, network measurement, network access techniques, economics of networking, management of networks, network applications, future directions for networking, and local area networking.

Three copies of 1,000-word abstracts should be submitted to: Ronald Larsen, NASA Goddard Space Flight Center, Code 570.1, Greenbelt, Md. 20771, by July 15.

For further information, contact: Helen M. Wood, National Bureau of Standards, Technology B-212, Washington, D.C. 20234 (301-921-2601).

Sales Surge Continuing In 'Made In U.S.' Goods

EXPORT FIGURES, COMMERCE-AIDED STORE PROMOTIONS ABROAD CONFIRM LIVELY APPEAL OF CONSUMER ITEMS

The "Made In U.S.A." label on consumer goods continues to attract growing numbers of customers in department stores and specialty shops in all parts of the world. This observation is apparent from recent overall U.S. export statistics and from reports on Commerce Department-sponsored in-store promotions abroad.

U.S. consumer goods exports (excluding automotive), according to Commerce figures, reached almost $8 billion in 1976, about a 25 percent gain over the previous year. Since 1970, such exports have nearly tripled, and it is anticipated that they will continue to climb at a substantial rate.

Commerce's international trade specialists, who have assisted merchandisers abroad in arranging special displays of American goods, are currently reporting on the sales momentum built up by promotions that were linked to the U.S. Bicentennial. Though the celebration is history, the 1976 observances abroad are having follow-on effects now being felt in reorders of last year's best-selling items.

Reports also stress that other factors noted in recent years—better price competitiveness, emphasis on quality products, changing world tastes—are obviously continuing to build the American upsurge in the consumer goods field.

Looking at the effect of the Bicentennial promotions that he and his staff helped organize, Richard Garnitz, Director of Commerce's Office of International Marketing, commented this month: "The momentum from special American Bicentennial promotions in many stores abroad last year carries over into the current merchandising period, as counter displays reflect the store purchasing programs begun months earlier."

Turning to the longer-term factors, Garnitz added: "Product quality, increasing disposable incomes, the 'leisure-time revolution,' and Westernization of taste —all contribute to the expanding demand for U.S. consumer goods. Equally important is the price situation, which for the past several years has been generally favorable to U.S. exporters—thus helping to establish purchasing patterns that show solid signs of continuing. In addition, the residual effect of five years of intensive U.S. promotions has created a linkage between the purchasing plans of merchants and buying aspirations of consumers in foreign markets."

According to reports on the Bicentennial events, jeans seem high on the list in almost every market, as are bed linens, machine-made glassware, sporting goods, stationery, and a variety of other items—including many not previously stocked in a particular outlet.

One such event—the first multi-store promotion of American consumer products to be held in a foreign shopping mall—took place last fall at Taby Centrum near Stockholm. More than 40 stores, including specialty shops and two major department stores, participated in Taby Centrum's "Amerikavecken," purchasing U.S. goods from about 65 suppliers.

During the 10 days of the promotion, retail sales increased almost 200 percent over the comparable period a year earlier, as shoppers were drawn to the mall by the opportunity to purchase new items of typically American merchandise. Among the best selling products, in addition to those mentioned earlier, were phonograph records, cosmetics, and toys. All Taby merchants later indicated plans to reorder much of the merchandise.

A jazz festival featuring internationally known musicians, a photography show loaned by the U.S. Information Service, and performances by classical musicians were among the special attractions. Taby's modern indoor courtyard was

CROWDS EVERYWHERE—*Shoppers crowded the "Made in U.S.A." displays during last year's Bicentennial Commerce-sponsored store promotions. Above is a scene from the Shalom Stores three-week "American Carnival" in Tel Aviv.*

FASHION SHOWS, MUSIC—*A broad range of attractions drew customers to the U.S. displays in various department stores. Above, at Jenners in Edinburgh, quality women's clothing was demonstrated to store officials. In photo on right, a jazz festival by internationally known musicians drew customers to Taby Centrum Shopping Center, Stockholm, where records and sheet music were among the best sellers. More than 40 stores participated in the "Amerikavecken."*

festooned with American flags, posters showing U.S. tourist sites, and an Amerikavecken poster designed in a contest sponsored by Taby Centrum in local schools. Each store in the complex chose one of the States as a thematic centerpiece.

Quality for Scotland

Quality and variety proved to be the key selling points during another such event, the first in Scotland, held by Jenners Ltd., a prestigious retail outlet in Edinburgh. Jenners had previously carried almost no U.S. lines. Its management now reports plans to continue many of the items first marketed during the promotion, and to send buyers to the United States regularly in the future. Special interest was shown in dress materials such as chiffon, polyester, nylon jersey and dacron in plain, patchwork and prints; costume jewelry; furniture and luggage; and hosiery.

The store was decorated throughout in red, white, and blue, a theme echoed in the display windows. A Bambi exhibition for children, fashion shows and an exhibtion of porcelain by Boehm for older shoppers were special attractions.

Three lists designed to assist U.S. exporters of consumer goods are available on request, as follows: International Department Stores and Mail-Order Houses With Best Potential for Sale of U.S. Consumer Goods; Best Selling Products; and Buying Offices Serving Retail Stores Abroad. Write Charles E. Johnson, Office of International Marketing, U.S. Department of Commerce, Room 6051, Washington, D.C. 20230; or telephone, 202-377-4705.

Taiwan's Far Eastern Department Stores featured American consumer products in a four-part promotion, and almost 3.5 million visitors came from all over the country. The events were held in the main Taipei store, in a new store in Tainan, and in two branch stores, at Kaohsiung and Taichung. Popular attractions included an American square dance group and displays of Bicentennial cultural and historical articles. Among the best sellers were kitchen utensils, ceramic ware, soaps, pipes, gardening tools, and infant items.

Reorders foreseen in Israel

At about the same time, Shalom Stores, Israel's largest department store, was conducting a three-week "American Carnival" sales campaign in two Tel Aviv locations. This in-store promotion included a Disney World theme, concerts of American music by banjo and guitar musicians, a replica of the Liberty Bell, and a display of ship replicas carrying out the Americana spirit.

Shalom Stores management reported: "The promotion attracted vast crowds . . . substantial reorders of successful items are already foreseen." Some of the best-selling items were women's lingerie, men's sportswear, children's clothing, and kitchen gadgets. More than 70 percent of the U.S. goods imported for the occasion sold out during the American Carnival.

In addition to buying for its own stores, Shalom Stores has established a subsidiary, MAKOL Ltd., for nationwide sales to other wholesalers and retailers. All purchasing from the United States is through Marcent International Inc., 9 West 57th St., New York, N.Y. 10019, attn. Kurt Heilbronner; telephone 212-753-0902.

Commerce-sponsored in-store promotions scheduled for the remainder of this year are: June, at Georges in Melbourne and Ito-Yokado in Tokyo; July, Isetan in Tokyo; September, MIRO in Amsterdam and La Samaritaine in Paris; and November, Globus in Zurich.

BICENTENNIAL FOCUS — *Historical, cultural, and travel themes depicted in posters, alongside latest fashions on mannequins, added to the interest shoppers displayed in buying things American.*

France Issues Regulations On Language Requirements

France has issued regulations making the use of the French language mandatory on labels, presentation or advertising leaflets, instruction manuals, warranties and other product informational items, and in documents used in business transactions.

Some documents are exempted, such as those used in transactions between foreign exporters and French importers, and in internal company transactions. Legal responsibility for infringements falls on French importers who resell products. Foreign exporters are responsible only if they sell directly on the French market.

Regarding foreign words for which there is no French equivalent, a practical guide is the series of notices concerning development of the French language that have been published in the *French Official Journal* and that contain approved French-substitute words. Exempted from the translation requirement are foreign product names such as blue jeans and gin; names of foreign products registered in France by international agreement, such as whiskey, and manufacturers' brand names.

The law, No. 75-1349 of Dec. 31, 1975, applies to imports of goods and services into all French departments and territories as of Feb. 1. The implementing regulations were published in the *French Official Journal* of March 19. Copies of an unofficial English translation are available from Industrialized Nations Division, Office of International Trade Policy, U.S. Department of Commerce, Room 3053, Washington, D.C. 20230. Notices containing approved French words will be available from the same source in a short time.

Mississippi Valley Conference Features Mexico, Middle East

Commercial relations with Mexico and with the Middle East will be featured subjects at the 32nd Mississippi Valley World Trade Conference, to be held June 8-10 at the New Orleans Fairmont Hotel.

Mexico's Ambassador Hugo B. Margain will address the participants, following a panel session on doing business with Mexico at which Al Sterling, the Commerce Department's Country Marketing Manager for Mexico, will speak. Mohamed A. Baghal, executive director of the U.S.-Arab Chamber of Commerce, will address the windup banquet.

Howard F. Casey, Deputy Assistant Secretary of Commerce for Maritime Affairs, will participate in a panel discussion on maritime innovations. Roy F. Gootenberg of Commerce's Office of International Marketing will also speak.

INVITING ILLINOIS FIRMS TO PARIS—*Director Bruce W. Strong of the Paris U.S. Trade Center (left), discusses exhibition opportunities with leaders of the Illinois Dept. of Business & Economic Development (from second left): Director Donald L. Duster, Chicago office official John Gallo, and European office chief Bart Smit.*

Multilateral Trade Negotiations

This article is another in a series of progress reports on the multilateral trade negotiations, prepared by the Commerce Department Office of Int'l Trade Policy.

GENEVA

The May 12-13 meeting of the **Tropical Products Group** heard views from three sides which, in summary, provide useful indications of the current status of the negotiations in this area. The statements came from: 1) the developed, or industrialized, nations, except the United States; 2) the less developed countries (LDCs), and 3) the United States, which has taken a position on tropical products concessions differing from that of the other industrialized nations.

The industrialized nations submitted a report on the extent of the trade concessions they have already implemented (these are, incidentally, the first concrete results of the current round of the Multilateral Trade Negotiations). A number of their delegations indicated that these concessions represented the maximum effort their governments could make towards treating tropical products as a "special and priority sector" in the MTN. However, it was noted that they would consider the possibility of making additional concessions within the MTN as a whole as the overall negotiations progressed.

The LDC representatives, while expressing appreciation for the efforts made to date, indicated their dissatisfaction with both the scope and coverage of these concessions. The LDCs emphasized their belief that a major effort should be made to improve those concessions already implemented and to make wide-ranging additional concessions in response to the requests they had submitted.

The position of the United States, which stands alone in seeking reciprocal contributions from the LDCs as a condition for making tropical products trade concession, was the focus of further discussion. The LDCs emphasized the importance they place on early implementation and improvement of the U.S. offers. The U.S. representative reiterated continuing readiness to hold consultations with requesting countries in order to reach mutually satisfactory agreements but stated that the scope and depth of U.S. concessions would depend on the extent of LDC contributions in return. Several LDCs restated their position that any contributions they make would be on the basis of additional benefits received from the overall MTN and consequently should not be made until late in the negotiations.

The Group agreed that, to make progress as a body, it should encourage consultations to continue between the requesting and offer-making countries. It was also agreed that other MTN groups (e.g., Agriculture, Tariffs, Nontariff Measures) should also examine those LDC requests in the tropical products area which have not been met fully in the Tropical Products Group. Date of the next meeting is still to be determined.

The **Safeguards Group** on May 3-4 continued its discussions on revision of the GATT Article XIX safeguards system. Subjects covered included criteria and conditions for safeguards actions, types of measures proposed for the system, methods of application, and domestic public procedures. A U.S. paper submitted to the group on domestic public procedures brought extensive and constructive discussion but no alternative proposals. Next meeting: June 27.

Education-Oriented Australia Is Expanding Market For Training Equipment, Materials

Australia is said to rate remarkably high as an education-conscious nation, and the growing market for educational equipment and materials should provide increased sales prospects for U.S. manufacturers. Participants in a recent Sydney U.S. Trade Center exhibition of educational and training aids observed a firm commitment to the use of such products among planners, individual teachers, and instructors in education, industry, and business who viewed the displays.

The 22 exhibitors demonstrated their "commitment" to the area's market potential by signing 35 agent/distributor agreements—an alltime record for Sydney Center events—with another 17 under negotiation at show's end. A licensing agreement was concluded; three others, and a joint venture, also were under negotiation.

Among the aids exhibited were a variety of projectors, duplicators, instructional films, cassette kits, reading instrumentation, books and publications, packaged training programs—in other words, both "hardware and software."

Almost all of the equipment was reported to be price competitive. Most educational hardware available in Australia is imported and, in general, technological features rather than price are more important in determining sales potential. U.S. equipment competes with imports from Japan, the United Kingdom, and Germany; however, most of the exhibitors considered that their strongest competition came from other U.S. firms marketing similar products.

As for educational software, exporters will need to insure that their products are compatible with the Australian school system and curricula; for example, American-accent children's records or scientific experiment cards without metric measure would not be likely to compete with increasing local production.

Although the educational sector is the largest among users of such products, industrial users are expected to increase rapidly, creating a wider market for vocational training aids and materials. Libraries, too, are expected to provide a growth market.

Exhibitors' off-the-floor and projected sales were reported at more than $3.7 million.

EDUCATION AIDS—*At U.S. Trade Center show in Australia, Robert Stock (standing), Int'l Div. of Wilson Learning Corp., is shown with David Proud of Sydney, signing representation agreement.*

U.S. Booth At Lyon Fair Fields Product Inquiries

The first official U.S. participation in 16 years at the Lyon International Fair was a booth that included a video search microfilm file keyed to 20,000 U.S. commercial catalogs.

From more than 100 specific requests for information about U.S. products received at the booth, the staff obtained 31 firm sales leads. The catalog search operation generated dozens of other requests for information, and this will help the U.S. Trade Opportunities program in France.

French Prime Minister Raymond Barre visited the fair in Lyon, France's second largest city, to dramatize his government's decentralization emphasis in its 1976-80 economic plan.

International Fair, Jidda '78

U.S. manufacturers and exporters are invited to participate in the fourth annual Saudi International Trade and Industry Fair, to be held in Jidda, March 15-29, 1978. The fair will be organized by the Saudi International Trade & Industry Fair Organization (SITIFO), under the supervision of the Ministry of Commerce. The range of exhibits is expected to include industrial and capital goods, machinery and equipment, and consumer products. Organizations or enterprises from 33 countries were represented at last year's event. Write: SITIFO, Post Box 4571, Jidda; cable, KAZADYOU; telephone, 32088.

Chemical Fair, India, 1978

U.S. firms are invited to participate in a chemical and chemical engineering exhibition and congress to be held in Bombay next January. Two of the main areas to be featured are oil exploration and pollution control. CHEM+TECH '78 will be India's second such fair; the first was in 1975. For additional information, write: CHEM+TECH '78 Secretariat, Taj Bldg., 210, Dr. D. N. Rd., Bombay 400 001; cable, CHEMTECH; telex, 011-5084 JSGROUP.

SCANDINAVIAN INVESTMENT IN POLLUTION CONTROL SPURS EQUIPMENT MARKET

Pollution control equipment is an area in which U.S. products will continue to do well in Scandinavia. A recent exhibition in Stockholm confirmed a growing market for many such products—especially analyzing and monitoring instruments.

One Scandinavian business journal observed that one out of every four engineering research projects is dealing with environmental protection questions. Recycling, for example, is coming to be a very important theme throughout the region. Sweden and Denmark have proceeded rapidly throughout the 1970s with heavy investment for pollution control. Although Norway and Finland have been somewhat less aggressive, Norway especially is expected to make a strong drive in the next few years. U.S. manufacturers who are established in these markets are in a good position to take advantage of sizable industrial and governmental investments when they are in the development stage.

Best prospects

At the exhibition in the U.S. Trade Center, these products were rated to have particularly high potential in the near future: air analyzing instrumentation (NO, NO_2, NO_x, O_3, SO_2), air particle sampling instrumentation, gas chromatographs, ultraviolet spectrometers, atomic absorption spectrometers, pH instrumentation, liquid chromatographs, ultrasonic leak detectors for gases and fluids, computerized diagnostic test systems for cars, solid waste pyrolysis conversion systems, electrostatic precipitators, ventilation and heat recovery systems, architectural and industrial noise control products, audio dosimeters, sludge treatment process and brine concentration systems, electronic remote data acquisition control systems, and worker protection items. In all, 38 U.S. companies displayed some 90 products.

Twenty representation agreements were signed or under negotiation as a result of the show. Direct sales reached $77,680, all by new-to-market firms; additional orders expected during the next year are estimated at some $8.2 million.

For the opening of the Stockholm exhibition, the guest of honor was Wilfred Paulsson, Director of Sweden's Environmental Protection Board. Subsequent seminars featured Nordic experts in air pollution control, wastewater and effluent control, auto emissions control and worker environment protection. Panel participants included spokesmen for research institutes, regulatory agencies and industry groups in the various Nordic countries.

PROBLEMS SLOW CANADA, BUT CONSUMER SPENDING CONTINUES AT ACTIVE PACE

The slowdown in economic activity that hit Canada in the latter half of 1976 has continued, and real growth in 1977 is expected to be less than last year. Uncertainties in the business community regarding general economic conditions domestically and abroad, concerns about the Quebec separatist movement and doubts regarding the end of wage and profit controls constitute a psychological drag on the economy. A resurgence in inflationary pressures has recently surfaced, and the government may have difficulty reaching its goal of a 6 percent Consumer Price Index increase in the second year of controls even with a marked decrease in large wage settlements. Despite a high and rising unemployment rate, the government's top economic priority is the inflation fight, and fiscal and monetary restraint are expected to continue throughout the year, according to the U.S. Embassy in Ottawa.

Consumer spending has, however, remained remarkably strong, and thus there are markets for U.S. goods, although a drop in the exchange value of the Canadian dollar makes imports more expensive. Economic activity in the various provinces will be highly uneven, and U.S. exporters may be required to target their markets more selectively. Changes in the administration of the Foreign Investment Review Act should provide a better domestic welcome for foreign investors, and U.S. interests should be alert to opportunities generated by increased expansion of Canadian businesses abroad.

On a customs basis, total Canadian exports increased about 15 percent in 1976, and Canada's exports to the United States rose 19 percent. The U.S. share of total Canadian exports increased to 67.8 percent from 65.4 percent in 1975 and accounted for 85 percent of the total growth. Exports to the United States of motor vehicles and parts increased almost C$1.8 billion (C$950 million for vehicles, C$830 million for parts). Forest products increased by C$990 million from depressed levels in 1975.

Natural gas deliveries to the United States increased C$525 million, but crude oil exports declined by C$765 million. Canada was extremely helpful in supplying emergency gas supplies to U.S. states hit by the cold weather and heavy snows during the winter. In Ohio and Pennsylvania those emergency supplies provided the margin of safety in keeping many plants from shutting down. The continued production in the two states also prevented the closing of a number of Canadian factories working, in part, for the U.S. market.

Total imports increased by 8 percent, while imports from the United States rose 8.5 percent, following an expansion of 10.3 percent in 1975. The U.S. share of total imports rose, reaching 68.6 percent in 1976, up from 68.0 percent in 1975 and 67.4 percent in 1974. Imports from the United States of motor vehicles and parts increased C$1.0 billion (vehicles C$190 million and parts C$810 million). Imports from the United States of meat, forest products, chemicals, machine tools, and consumer goods also rose significantly, while imports of aircraft and steel declined.

Most Canadian exporters expect that 1977 will be an even better year for their businesses than 1976, according to the Canadian Exporters Assn. The U.S. market is seen to offer the best prospective growth, with increases in demand for forest products, minerals, processed metals, and agricultural, industrial and transportation equipment. Some exporters should also benefit from the decline in the exchange value of the Canadian dollar.

A 10 percent swing downward in the exchange value of the Canadian dollar since late 1976, thus making imports more expensive to Canadians, may inhibit the growth in U.S. exports for 1977. The sluggish economy and a slowdown in the growth of personal income due to the wage control program may also dampen the import market. However, U.S. Consulates General across Canada continue to report some attractive trade prospects in various regional markets.

The Provinces report

In Ontario, the extensive Toronto importing community continues to be interested in new products. This interest covers the entire range of manufactured items, with particular emphasis on building supplies and hardware, chemicals, food processing and packaging equipment and material, pollution control equipment, electronic components, and electrical and non-electrical machinery.

Montreal reports that Quebec cannot supply from its own resources process control equipment instrumentation requirements, and the province's need for automation and efficiency equipment should provide a fairly steady market for U.S. products in this category. For similar reasons, products related to energy—generators, pumps, compressors, converters and valves—have some market potential.

The province of Manitoba is especially interested in promoting investment in food processing plants to take advantage of locally produced raw material. Opportunities exist in the province for U.S. exporters of construction equipment, farm implements, recreation equipment, and food processing equipment.

Saskatchewan is attempting to diversify its economic base and there will be foreign investment opportunities in the manufacturing and processing sectors. There are markets for U.S. products in food processing, mining equipment, nuclear energy, environmental protection technology, and farm construction equipment.

In Alberta, provincial authorities are actively promoting petrochemical, agricultural processing and forest product projects. The areas which appear to have the greatest potential for U.S. suppliers include earthmoving and construction equipment, capital goods for the chemical industry, drilling equipment, natural gas plants and gathering systems, and hospital and medical supplies.

In Atlantic Canada, the best commercial prospects for U.S. suppliers are equipment for the coal mining industry, cost-reducing catering and hotel/motel supplies, farm equipment for root crops, and equipment for the logging and lumbering industry.

The British Columbia economy, which is expected to grow at a faster rate than Canada as a whole, should offer continued trade opportunities for U.S. exporters, particularly in the area of capital equipment for repair and modernization.

Legislation for a new Bank Act is still expected to be introduced this year, but the current Bank Act, which was to expire on June 30, 1977, has been extended for six months. It is expected that the proposed legislation, as outlined in a government White Paper last year, will contain provisions allowing foreign banks to become chartered banks, albeit with restrictions. The U.S. Embassy would be pleased to discuss the new Bank Act with representatives of U.S. banks not now operating in Canada.

Canadian officials have stepped up their efforts to attract more foreign investment, and regulations of the Foreign Investment Review Agency have been revised to streamline the review process and to broaden the concept of "related business" investment. Legislation amending the Foreign Investment Review Act is promised for later in the year, and, although no details have been given, the review process is expected to be streamlined even further.

U.S. Consulates in Montreal and Toronto continue to report interest by Canadian business in investment opportunities in the United States. Opportunities thus exist for individual State investment promotion groups to take advantage of this interest by sending investment teams to Canada.

Saudi Arabians Prepare Way For New Flurry Of Projects

Last year was pivotal in the economic development of Saudi Arabia. Despite increasing oil revenues, a noticeable decline in economic activity took place in the second half of the year. Projects were postponed, reoriented, or cancelled as the Saudi Government established priorities of fighting inflation, removing bottlenecks, and developing infrastructure. These efforts resulted in a remarkable improvement in the situation at the ports, a trend toward stabilization in the prices of land, housing, consumer goods and motor vehicles, and a perceptible improvement in condition of roads, highways and public services.

The pace of economic activity is expected to pick up again in late summer as new projects come on line following the release of a new budget this month, according to the U.S. Embassy in Jidda.

The political stability of Saudi Arabia, and its basic policy stance in favor of the West and free enterprise, make it an attractive area for U.S. investment and a promising market for export of U.S. goods and services. The primary opportunity for U.S. firms in the next two to five years is in the major projects area via joint ventures or contracts with Saudi Government entities. Shell, Mobil, Dow, Grace, Exxon, and a variety of other major U.S. firms have already negotiated joint ventures in the industrial projects to be located in Jubail and Yenbo. The master plans for these two projects are being prepared by Bechtel and Ralph Parsons, respectively. These two companies also have the project management contracts for the new Riyadh and Jidda airports.

Many other U.S. firms stand to profit greatly by way of sub-contracting on these and on projects undertaken by third-country firms. Kellogg already has the contract to build the Mobil/Petromin lube oil plant near Jidda, and Fluor will undertake a massive east coast gas gathering project for Aramco.

Equally good prospects are offered by the various public infrastructure projects in the plan. U.S. firms are vying for large contracts involving design and construction of projects as varied as Riyadh University, a new Ministry of Foreign Affairs complex, and extensions of the automatic telephone system. The U.S. Corps of Engineers alone may well manage projects totaling more than $18 billion over the next ten years.

U.S. investors who carefully survey the market and existing problems are also finding profitable areas in which to begin joint ventures with private Saudis. Foremost McKesson, for example, has a joint venture with a Saudi firm on a 1,000 gallon-per-day dairy. U.S. firms are proceeding cautiously, although Saudis are seeking joint ventures in a large number of fields, including road construction, well drilling, livestock raising, prefab housing and small consumer goods factories (e.g., paints, doors, plastic products). Labor intensive projects should be avoided whenever possible.

U.S. exports continue to hold their share of the Saudi market due to the reputation of excellence which U.S. products enjoy. An estimated 22 percent of Saudi imports originated from the United States in 1976, as U.S. suppliers doubled their exports to the Kingdom over the 1975 figures. Saudi Arabia in 1977 will be the largest importer of U.S. goods in the Middle East (including Iran), with best prospects for sales in the fields of construction materials and equipment, petrochemical and energy-related goods and services, capital equipment, water resource products and services, telecommunications equipment, household furnishings, office equipment, medical equipment and supplies, power production and transmission products, and luxury and leisure consumer goods.

Inexpensive consumer goods are in oversupply, and U.S. firms will find the competition stiff from European and Asian suppliers, who flooded the market in the last two years with cheaper goods. The total size of both durable and non-durable consumer markets will remain small in an absolute sense, as the Saudi and foreign population does not exceed 7 million.

Catalogs and company literature will not sell the product in Saudi Arabia as in the United States or Europe. Neither will a single visit of three days. This market is best sold by perseverance. It is wide open, but U.S. firms should expect tough competition from European and Japanese companies.

SAUDI EMISSARY IN SAN JOSE—*The personal financial counselor to King Khalid of Saudi Arabia recently toured San Jose's Foreign Trade Zone as part of a major west coast tour to explore possible investments and business dealings between Saudi Arabia and the United States. Abdel Rahman Al-Sadhan, left, counselor in finance to the royal court, and Dr. Abdel Rahman Al-Zamil, center, dean of the University of Petroleum and Minerals in Dhahran, Saudi Arabia, were welcomed to the California zone by Paul Mariani, Jr., chairman of International Business Parks, Inc.*

Brazil Reminds U.S. Exporters Of Policy On Invoice Prices

According to the Foreign Trade Department of the Bank of Brazil, some U.S. exporters have supplied inaccurate information on shipping documents regarding their firms' price lists. The Brazilian import regulations specify that, "in lieu of official manufacturers' price lists", the importer may substantiate his request for an import permit with a pro-forma invoice issued by the supplier, containing, among other information, statements to the effect that "no price lists have been issued for the commodities listed on that invoice", and "the prices stated on the invoice are the current export prices quoted to any market", and "a given agent's commission will be paid to the Brazilian agent" (if pertinent).

Failure to make such statements, or the making of false statements to this effect, may subject the foreign exporter to sanctions such as blacklisting, curtailment of issuance of import permits where defaulter is listed as supplier, extensive investigation of exporters' statements by Brazilian Consular agencies abroad, etc.

Persistent Economic Problems Put Brake On Czechoslovakia; U.S. Suppliers Show Big Gains

During the first year of its Sixth Five-Year Plan (1976-80), Czechoslovakia's centrally planned economy achieved modest growth rates but made little progress in resolving certain persistent, serious problems. Although it is one of the most industrially advanced nations in Eastern Europe and enjoys a relatively high living standard for the Communist world, the Czechoslovak Socialist Republic registered one of the area's lower growth rates last year, according to the U.S. Embassy in Prague.

Industrial output increased by 5.5 percent, compared with 7.0 percent in 1975. Capital investment rose 5.2 percent, down from 7.9 percent during the final year of the Fifth Five-Year Plan. National income, perhaps the most significant economic index, grew 4 percent in contrast to 6 percent the previous year. Official reports state that output rose in all major branches of industry. The fastest growing sectors were: engineering, 8.9 percent; chemicals, 8.6; glass, porcelain and ceramics, 7.6; and wood processing and building materials, 7.4.

Perhaps the key, though hardly unexpected, economic development of 1976 was the apparent lack of significant progress in remedying several crucial problems troubling Czechoslovakia. This resource-deficient industrialized country is highly dependent on imports of raw materials and capital goods, the cost of which have risen dramatically in recent years. It pays for these essential imports by exporting finished goods which generally have not risen as rapidly in price. Czechoslovak figures for 1976 show that, while trade with CEMA (COMECON) partners moved toward balance, the deficit with hard currency countries as a group continued to rise substantially. Among other things, this indicates the continuing difficulties its exports face in competing in non-Communist markets.

This trend, in turn, reflects the familiar problems which plague Czechoslovakia's economy: aging industrial plant, low labor productivity growth rate, high wastage of fuels and other imported raw materials, chronic shortage and misallocation of manpower, production bottlenecks and marketing difficulties. Moreover, for a relatively small nation of 15 million, Czechoslovakia produces an enormously diversified range of industrial products, denying it greater scale economies and fuller benefits of specialization.

Czechoslovakia's trade in 1976 with other Communist countries, which collectively account for roughly two-thirds of its imports and exports, moved toward approximate balance after two years of large deficits. Total exports to these countries rose by 16 percent while imports from them increased by only 10.5 percent. This was welcome news since Czechoslovakia was seriously affected by the large rise in Soviet oil prices in 1975. However, the Czechoslovaks are still concerned about balancing their CEMA trade because prices of oil and other imports are expected to continue increasing faster than prices of Czechoslovak exports.

With non-Communist countries as a group, Czechoslovakia's trade deficit continued to grow significantly. Imports from capitalist and developing countries (mostly paid for with hard currency) increased 10.2 percent but exports to those markets grew a mere 1.4 percent, far below Western inflation rates. Czechoslovak officials publicly blame the recession in the West for this poor export performance. However, another key factor in this negative trend was undoubtedly the steady erosion of international competitiveness (in terms of quality, design, delivery times, marketing, and spare parts availability as well as price) of many Czechoslovak goods.

According to preliminary Czechoslovak data, exports to the United States increased by 12.8 percent while imports rose 84.4 percent. Comparable U.S. figures, which do not cover precisely the same transactions and omit some transhipments which are reflected in Czechoslovak data, show increases of 3.7 and 181.0 percent, respectively. Both sets of figures indicate that the 1976 drought caused a dramatic spurt in Czechoslovak imports of grains and that the growth rate for Czechoslovak exports to the United States was sluggish.

Positive indication

As the results of 1976 indicate, American exporters of agricultural and manufactured goods can increase their sales to Czechoslovakia significantly even before various bilateral political issues are settled. This requires, of course, hard work and a deep knowledge of import needs and of the way Czechoslovak organizations go about purchasing in the West. Competition from Western European, Japanese and other suppliers is keen, and many of these competitors are well entrenched in the Czechoslovak market. The shortage of hard currency, Czechoslovakia's reluctance to borrow in the West and the growing official insistence on industrial cooperation agreements (including compensation arrangements, counter-purchase deals, etc.) create problems for U.S. firms. Nevertheless, U.S. products, and especially American technology and know-how, enjoy very high reputations in Czechoslovakia, which has a long tradition as a technologically advanced, industrialized nation. Individual U.S. firms can expect to increase their sales to Czechoslovakia if they have products that serve the objectives of the Sixth Five-Year Plan and if they actively promote these products.

Impact of the Five-Year Plan

Significant sales opportunities are created by the Sixth Five-Year Plan, which lays heavy stress on rationalizing Czechoslovak industry through imports of Western technology and capital goods. Overall industrial production is to go up 33 percent during the 1976-80 period. The Plan gives top priority to bolstering export capabilities, improving output quality and production efficiency and reducing consumption of raw materials, especially energy. Special emphasis is laid on strengthening the engineering and chemical/petrochemical sectors. Industries which have a special technological advantage or domestic raw material base will also be expanded. Due to the chronic manpower shortage, greater automation is also envisaged.

To develop these opportunities, Western firms are now allowed to open representative offices in Czechoslovakia subject to certain conditions. Approval to open such offices was granted to about 20 European and Japanese firms in 1976, but the scarcity of skilled personnel, office space and living quarters as well as the existence of various administrative problems have limited U.S. business interest in this option to date.

Officials have stated that over $3 billion will be spent in the West for goods and technology during the Sixth Plan. Czechoslovak importers (i.e., the Foreign Trade Corporations which have monopolies on foreign trade in given sectors) are generally allowed to purchase Western manufactured goods for hard currency only when comparable, although not necessarily identical, items are not available domestically or from sources in other CEMA countries. Despite strong West European and Japanese competition, American suppliers of high technology products and know-how enjoy particularly bright sales prospects.

Prospects are best for those items which will help Czechoslovak industry meet the objectives of the Five-Year Plan and cope with the problems already mentioned. Electronic data processing equipment, process control instrumentation, industrial electronics, equipment and related know-how for the chemical industry and numerically controlled machine tools are all promising. Other good prospects include food processing and packaging equipment, plastics production machinery, pollution monitoring and control equipment, materials handling and transfer equipment, industrial controls, medical and surgical equipment, advanced metallurgical technology and sophisticated office machines. Big ticket turnkey

projects present sales possibilities in certain selected sectors, most notably petrochemicals, pulp and paper, but generally U.S. exporters can find more opportunities in more modest Czechoslovak plans to modernize or expand existing plants.

Consumer goods do not, as a rule, offer good prospects. However, there is increased official interest in labor-saving devices and services for the home because of the importance of working housewives in the labor force. Agricultural machinery and irrigation equipment generally are not potential sales items for American suppliers because of CEMA substitutes, but special exceptions may exist. Equipment for construction and coal mining, automated equipment for rolling mills and major items related to oil and gas pipelines are also promising. Czechoslovakia hopes to improve its export capabilities by purchasing licenses for advanced Western production technology for those industries emphasized by the Plan, and this flow of technology can also generate sales of equipment.

The American Embassy in Prague and the U.S. Department of Commerce carry on an active program to help U.S. firms export to Czechoslovakia. The Embassy has recently established a new Business Facilitation Center to provide additional services for visiting Americans. For example, business visitors can now arrange to make sales presentations to small groups in the Center, using slides, movies or videotapes. Commercial reference materials have also been expanded, and other services are provided. In addition, Commerce's Bureau of East-West Trade organizes several technical sales seminars each year which visit Czechoslovakia to stimulate buyer interest in the latest advancements of American industry. Commerce and the Embassy also organize U.S. industry participation in other trade events in Czechoslovakia. The most notable is the Brno Engineering Fair in September. Americans interested in any of these activities are invited to contact Commerce's Bureau of East-West Trade in Washington or the Embassy.

BULGARIA TURNING MORE TOWARD WEST FOR HELP IN FULFILLING NEW PLAN

Bulgaria's economic performance during 1976 was below expectations but still respectable. National income growth was reported as 7.0 percent and industrial growth at 8.0 percent. Agriculture posted only a 3.1 percent growth rate but showed considerable variation among different crops. Machine building and metallurgy continue to be the mainstay of Bulgaria's economy, but large investments in chemicals and electronics are causing these industries to grow rapidly, reports the U.S. Embassy in Sofia.

This is the second year of the Seventh Five-Year Plan (1976-80), and the annual plan calls for a continuation of policies of reconstruction and modernization of existing industrial establishments. Major growth areas in 1977 will be machine building, chemicals, electronics and metallurgy. Agriculture was reorganized during 1976 and is to grow somewhat more slowly. Bulgarian foreign trade will continue to be closely integrated into COMECON activity, and aggressive action to reduce the hard currency deficit will continue during 1977.

The Seventh Plan, officially ratified in October, contained a few downward adjustments from earlier reports, but the basic priorities were kept intact. By 1980 national income is to increase by 45 percent, industry is to increase by 55 percent, and agricultural production is to increase by 20 percent over 1975 levels. Within the industrial sector the largest output increases are expected to be in machine building and metallurgy, buses and tractors, electronics, electrical equipment and chemicals.

During the 1976-80 period, mineral resources development will also have high priority in an effort to reduce dependence on imported raw materials. Exploitation of existing deposits of marble, copper and other non-ferrous metals will continue, and Bulgaria will increase exploration of the Black Sea for oil. There are also ambitious long-term plans for development of other energy sources, including coal and nuclear energy. In spite of these efforts, however, Bulgaria will continue to import most of its energy resources and other raw materials from the Soviet Union.

Maintaining economic growth

As Bulgarian industry matures, the rapid growth rates of the past may be more difficult to maintain. The economy is already troubled by problems such as low labor productivity, inefficient management, and unused or obsolete plant capacity. Although these problems are recognized, existing remedial programs have not produced satisfactory results, and continued organizational and personnel changes may well continue for several years. Nonetheless, while the lack of detailed information makes prediction difficult, it is reasonable to expect that Bulgaria will continue to develop its priority areas at a fairly rapid pace, even if this requires some slowdown in other sectors of the economy.

Bulgaria has increasingly turned to the West for goods and technology unavailable from communist markets, and, as a result, Bulgarian-U.S. trade has increased ten-fold in the past five years. Trade during 1976, by customhouse statistics, was slightly more than $70 million, a 40 percent increase over 1975. Although agricultural commodities, U.S. corn and Bulgarian tobacco, continue to be the major items traded, sales of machinery, technology and other manufactured products have increased as a share of U.S. exports. Further, the volume of these products is somewhat understated because much of the trade in chemicals, electronics and other products is handled by European subsidiaries of U.S. firms.

The large increases in U.S.-Bulgarian trade in 1975 and 1976 indicate that the Trade Act of 1974, while having had some dampening effects, has not seriously disrupted the trend toward increased commercial activity. Furthermore, the record increases in bilateral trade during the first half of the year were sufficient to insure overall growth, even though trade declined sharply during the last half of 1976 when Bulgarian import restriction efforts began to have full force.

Last year also witnessed the signing of a number of major contracts for technology as well as general cooperation agreements between Bulgaria and numerous Western companies. An American firm supplied the technology for a major polypropylene project, and a cooperation agreement was signed by one of the major American automotive companies.

Although hard currency imports continue to be trimmed in an effort to reduce the existing hard currency deficit, Bulgaria still looks to the West for advanced technology and know-how to maintain rapid growth in industry and to fully mechanize its agricultural sector. As a result, there will continue to be numerous business opportunities in those sectors in which Bulgaria considers the United States to be an important technological leader.

In agriculture, Bulgaria's policy of mechanization and integration will require large purchases of equipment for both crop production and food processing. Bulgaria will also continue to rely on imports of live cattle, swine and frozen semen to upgrade the quality of its herds. Bulgaria's need for agricultural chemicals is also a source of potential U.S. sales. The largest single opportunity for sale of equipment and engineering services will be for the Silistra Complex, a 300,000-acre integrated agrobusiness operation that will encompass grain production, animal raising and meat processing. Imports required for this project may ultimately amount to several hundred million dollars.

The chemical industry plans to rapidly expand its capacity for production of petrochemicals and petrochemical products in the next few years. Opportunities

also exist for licensing of new pharmaceuticals and cosmetics. A major cellulose and paper plant is being planned for construction during this five-year period, and although much of the basic equipment for this facility will come from the Soviet Union, Bulgaria has indicated a high interest in American equipment for process control and automated operation of the new plants.

The Bulgarian electronics industry continues to rely on numerous Western parts, and American computers are strong competitors for a wide range of computer needs, from the large systems down to small, special purpose machines. In the fields of communications and avionics, Bulgaria also looks westward for many of its complex equipment needs.

Bulgaria has expressed an interest in U.S. technology and know-how for development of its machine tool and metallurgical industries. A major plant for construction of heavy machinery is planned for completion during this Five-Year Plan, and construction of the Third Metallurgical Complex near Varna is to begin. Machine tool opportunities include production licenses and specialized equipment for use in Bulgarian plants. Construction equipment and systems for production of building materials are also areas with substantial commercial potential.

Bulgaria does not allow foreign firms to make equity investments, but it strongly encourages cooperation and buy-back agreements as a means of reducing its hard currency expenditures and involving foreign firms in its economy. These agreements will become more important as efforts to reduce hard currency deficits continue, meaning that creative and imaginative efforts will become increasingly necessary for major sales of equipment, projects and/or technology. Although it would be unrealistic to underestimate this and other difficulties, Bulgaria does offer substantial opportunities both in its own right and as a point of possible entree into the Soviet Union and other communist countries. Another growing area is sale of equipment to be used in Bulgarian projects in third countries such as Libya, Iran, Angola, etc.

Although the complexities of structure of the Bulgarian Government can still be an obstacle in some commercial negotiations, Bulgarian officials are beginning to show greater understanding of Western business methods, and this has made the mechanics of commercial activity somewhat easier. In addition, improvement in U.S.-Bulgarian political relations is reflected in bilateral commercial relations as well. Official U.S. commercial activities in 1976 included a highly successful exhibit at the Plovdiv International Trade Fair, two technical sales seminars and a visit by a delegation of the U.S. Patent Office. An April, 1976 visit by the Secretary of Agriculture also created new possibilities for agricultural cooperation.

BLACK SEA RESORT—*About 100 first-class hotels and 34 modern restaurants dot shore line of Slunchev Bryag, along the southern part of Bulgaria's Black Sea coast.*

CHILE'S FREE TRADE LOOK OPENS UNTAPPED MARKETS

Breaking sharply from several decades of economic policy based on import substitution, Chile in the past three years has converted itself into the freest trading country in South America. Copper continues to lead the way but other exports have shown impressive growth and in time should fulfill the government's objective of reducing Chile's vulnerability to the vicissitudes of world copper prices. This robust export sector is helping the Chilean economy emerge from the depressed levels of 1975, adds Harrison B. Sherwood, Commercial Officer at the U.S. Embassy in Santiago.

Chilean import duties continued to be cut during 1976, and are scheduled to drop to a band of between 10-35 percent by the end of 1977. Differences in policy regarding a common external tariff were instrumental in Chile's decision to withdraw from the Andean Pact (see *Commerce America*, Nov. 22, page 33); the Government of Chile would not accept the industrial inefficiencies of a high common Andean tariff. This factor appears to have been even more decisive than Chile's disagreement with the other five Pact members on the Andean group's restrictive rules on foreign investment.

The Chilean trade account in 1976 was featured by strong export demand in both traditional and non-traditional products. Because of sluggish internal demand, imports lagged behind. At mid-year the Central Bank declared a 10 percent revaluation of the Chilean peso, further encouraging imports—both to stimulate the depressed economy and to act as a brake on domestic prices. The revaluation did not prevent a large year-end trade surplus and, on March 5, the peso was again revalued by 10 percent. Official projections show a more balanced trade account in 1977, with imports due to rise by almost 20 percent.

Continued growth in the Chilean economy will mean increases in imports across the board. Some categories, however, stand to increase more rapidly than others. Three major sectors—mining, construction and agriculture—have foregone needed purchases of capital equipment in the past two years because of government-decreed austerity programs. This year should witness a loosening of the reins in these three industries, all of which are heavily influenced by the government's purchasing and credit policies.

Consumer goods will show strong growth as Chileans will have more money, a favorable exchange rate and increasingly lower duties to pay. After two generations of protective import barriers, most Chileans are just beginning to wake up to the possibilities of buying imported everyday items such as proc-

essed foods, drinks, clothing, toys, electronic wares, household appliances and the like, rather than depending on expensive, often shabby domestic products. American firms specializing in consumer wares should find this field very fertile.

Prospects for semi-processed goods—chemicals, fibers, lubricants and replacement parts—are good. Generally increased industrial activities should lead to a rise of 10-15 percent in these imports.

The United States, traditionally Chile's most important trading partner, continued to lead the list of Chile's suppliers in 1976, improving its share of the slightly smaller Chilean market from 29.4 percent in 1975 to 30.4 percent in 1976. Other important industrial competitors (i.e., non-petroleum countries) are Argentina, Japan and West Germany with, respectively, 11.7, 8.4, and 6.3 percent of the Chilean import market in 1976. Argentina regained its number two position after a sharp drop in sales in 1975, presumably as a result of the domestic chaos of that year. Japan's exports to Chile rose strongly in 1976, led by its quick response to a limited opening in the Chilean automobile market. West Germany continued to be an important supplier of industrial products to Chile, although its share of the market has dwindled slightly in recent years.

Of the leading suppliers to the Chilean market, both Argentina and West Germany rely heavily upon suppliers' credits. U.S. exports to Chile are largely on six-month letter-of-credit terms, although medium-term commercial credits are beginning to appear as Chile's creditworthiness improves. Concessional financing—Eximbank guaranties and P.L. 480 grain sales—is much less important than in the past.

The second tier of importers to Chile is made up of petroleum suppliers: Ecuador, Iran and Venezuela. (Chile produces only about 26 percent of domestic needs.) Following them come Brazil, the United Kingdom and Spain. Australia, formerly a strong competitor in Chile, continues to absent itself from this market for political reasons.

New investment law

Ambiguities in its basic foreign investment law D.L. 600 of July 11, 1974, led the Chilean Government to promulgate an extensive revision on March 11. The new version calls for national treatment of foreign investors, guarantees repatriation of profits and capital, gives an option for fixed tax and duty rates for 10 years, and has no limited terms or buy-out provisions as were required for many foreign investments under the Andean Pact's investment code. The new version still requires that a foreign investor conclude a contract with the Chilean Government on terms of the investment. Nevertheless, there are indications that this requirement will be less burdensome than in the past, particularly if the investor does not require a guarantee of fixed tax and duty rates.

The new investment law has important implications for suppliers of goods and services (engineering and consulting firms take note), especially in the minerals, petroleum and natural gas fields. Interested firms should maintain contact with the U.S. Department of Commerce in Washington (or one of its District Offices) in order to follow developments.

FINNS SEARCH FOR WAYS TO DEVELOP NEW EXPORTS

After two years of virtually zero growth in the Finnish economy, projections for expansion in 1977 cluster around 3 to 4 percent, according to Edward J. Marcott, Commercial Officer at the U.S. Embassy in Helsinki.

The critical factor is external demand and price levels for the products of the wood processing sector, which are expected to continue to grow, albeit slowly, from the very low levels of 1976. The internal economy will remain constricted by the Bank of Finland's monetary policy.

The Bank has indicated that continuation of the policy is necessary to control inflation, and that foreign borrowing authorizations, already allocated for 1977, have been reduced from 1976 levels. The Bank hopes to reduce the current account deficit to Fmk 1.5 billion (about $400 million) this year. Although this figure is probably too optimistic, a significant improvement from the Fmk 4.1 billion of 1976 is in prospect.

The wage negotiations of 1977, as yet not complete, will probably produce a further strain on the resources of companies already fully extended by inventory costs, by the burdens of debts incurred to pay for past investment which produced only surplus capacity in 1975-76, and by generally low profitability levels, due to the high production costs which threaten Finland's competitive position in world markets. A slight loosening of Bank of Finland credit restraints will probably be unavoidable.

Finnish domestic economic management measures have affected trade, some directly, such as the now terminated import deposit program, and the recently expanded cash payment list for imports. In fact, such measures have primarily served to intensify the impact of the domestic credit restraint and controls on foreign borrowing which are the bulwarks of the Bank of Finland's policy. Continuation of the latter policies will prevent any significant expansion of imports probably through the end of 1978.

The recession has highlighted the structural vulnerability of the Finnish economy, particularly its dependence on one very cyclical industry, wood processing. The basic policy for the development of this industry was established in the early 1970's, according to which forest harvesting is controlled at replenishable levels, with a limit on imported raw material of 10 percent of total consumption. Investments are designed to modernize plant and equipment and to raise the quality level of processing, but not to expand the basic volume capacity or the consumption of raw material. Since wood industry growth prospects are thus limited, it is necessary for firms and the economy as a whole to diversify.

The fundamental problem lies in identifying new export industries. The metal industry developed after the war, due to reparations obligations, and has continued to grow. However, due to the small domestic market and international competition, it remains, with the exception of mining and papermaking machinery, dependent upon specialized production, particularly in shipbuilding, not normally sought by the larger European industries. The metal industry faces the most serious problems in the next few years, as major competitors, particularly in shipbuilding, have surplus capacity, and the industry is burdened by high wages and other cost problems. It will be difficult for the industry to maintain its share of Finnish GDP, let alone grow, in the 1977-80 period.

Another area of interest

Another production area of potential interest is the electronics industry. Currently the major export products of this industry are television sets and tubes, and computerized systems, using imported elements, particularly for paper and pulp, medical and mining applications. New enterprises are starting up, despite the recession, and some firms are diversifying. The government has invested in a TV tube factory, but original expectations of rapid diversification into electronic components appear to have been delayed by the recession.

The implications of Finnish economic developments for American exporters are ambiguous. On the one hand, opportunities exist for products which increase efficiency in the use of raw materials or labor.

Opportunities in the newly developing electronics industry are promising. On the other hand, companies have reacted to hard times by consolidating and pruning their product lines, so they are less interested in agency agreements for products already represented in the market.

Imports of American capital goods have been affected by measures to reduce

foreign borrowing. There are very few opportunities for consumer goods, in which European producers are already established and market growth prospects are small.

In 1976, total U.S.-Finnish trade was virtually unchanged in value terms from 1975. U.S. exports to Finland fell by 3.5 percent, and the much smaller level of U.S. imports grew by 9 percent. The U.S. bilateral trade surplus fell from $241 million to $202 million, although 30 percent of this decline reflects changes in the exchange rate. Although the U.S. share of Finnish imports declined from 5.5 to 5.2 percent, the United States remained Finland's fifth largest supplier last year.

The most obvious explanation for the decline in U.S. exports lies in the tight money policy and control of foreign borrowing which severely retarded imports for investments, the traditional strong point for U.S. exports. Computers, for example, were affected by foreign borrowing controls, and major U.S. and third-country firms found that leasing opportunities were lost because of financial control factors.

Long-term problem

A longer-term problem for U.S. exporters is the Finnish-EEC Agreement, which puts U.S. suppliers at a competitive disadvantage. Similar institutional factors benefit EFTA and CEMA suppliers. One solution to this problem lies in Finland's desire to expand its exports. U.S. firms willing to consider cross-licensing or joint ventures could develop an advantageous position in the Finnish market with the help of a Finnish partner, who would be seeking market access in the United States.

The best prospects for U.S. exporters still lie in the areas of instrumentation, for process control, for environmental protection and control, such as automatic climate-control systems for offices and apartments, and for medical applications; automatic systems for more efficient use of raw materials and labor; electronic components and, currently small but promising, electronic production and test equipment.

For most U.S. firms, a local agent is the best marketing strategy. The U.S. Embassy can help an exporter become acquainted with the market and find an agent, and exhibitions at the U.S. Trade Center at Stockholm have proven effective in this regard. The major exposition in Finland is the Helsinki International Technical Fair, held annually in late September or early October. Several major European countries and firms and most Finnish producers and agents normally participate. Most American firms that participate at the Fair are represented by agents.

Calendar For World Traders

June 6—Knoxville—East Tennessee International Commerce Club luncheon meeting, International Trade Mart.

June 7—Chattanooga—Joint meeting of World Trade Council and Kiwanis Club, Read House.

June 8—San Diego—Luncheon honoring former Ambassador to Japan James D. Hodgson, Hotel El Cortez. Sponsors: Chamber of Commerce, World Trade Assn., World Affairs Council, Commerce Dept. Information: 714-232-0124.

June 8-10—New Orleans—32nd Mississippi Valley World Trade Conference, Fairmont Hotel. Sponsor: Mississippi Valley World Trade Council, 504-525-7201.

June 9—Cleveland—Seminar on Trading With Eastern Europe and the USSR, Cleveland Plaza. Commerce speakers: Susanne Lotarski will discuss Poland—The Economic and Trade Outlook, and Robert B. Dollison will speak on The Government's Role in East-West Trade. Sponsor: Cleveland World Trade Assn., 216-621-3300.

June 9-10—New York—American Management Associations seminar on Doing Business with Israel. Peter Hale, Director of the Commerce Action Group for the Near East, will speak.

June 13—New York—World Trade Institute begins its Evening School of World Trade.

June 13—Houston — Luncheon meeting of World Trade Assn. Sir Peter Carey, Permanent Secretary, Department of Industry of Great Britain, will speak on Development of the U.K. Economy. Information: 713-225-0968.

June 14—Los Angeles—Seminar on Problem Solving in International Credit, Hilton. Sponsor: Export Managers Assn. of California. Information: 213-627-0634.

June 14—Nashville — Middle Tennessee World Trade Council meeting.

June 14—Louisville—Kentuckiana World Commerce Council meeting, Holiday Inn Brownsboro Northeast.

June 15—Valley Forge, Pa. — Export Matchmaking Conference, Holiday Inn. Sponsors: Delaware Valley Business Magazine, Delaware Valley Manufacturers Assn., Philadelphia District Export Council (215-597-2850).

June 15—Greenville, S.C.—Seminar on Doing Business in Mexico. Conducted by Bernie McPheely, Trade Specialist, Columbia Commerce District Office. Registration: Rick Snoddy, 803-242-1050.

June 20-21—New York—American Management Associations seminar on Doing Business with Japan. Richard Garnitz, Director of Commerce's Office of International Marketing, will speak.

INTERNATIONAL BUSINESS REPORTS

The Red Tapes: Commentaries on Doing Business with the Russians. Cassette tapes, released by Westshore, Inc. $747.
The eight hours of commentary on these tapes is designed for in-house seminars and executive training. Among the seven speakers are Marshall Shulman, Director of Columbia's Russian Institute, and Marshall Goldman of Harvard's Russian Research Center. Topics include Soviet foreign policy and trade; dealing with Eastern Europe; how things work in Moscow; contract negotiations; the Soviet economy, how it works and why; the current situation in energy and technology; how the Soviets do business and what they need and want from the West.
Write: Westshore, Inc., 655 Redwood Highway, Mill Valley, Calif. 94941.

Chile Economic News. Monthly, about 12pp. Free.
Published by an agent of the Government of Chile. Includes information on finance and investments, commerce and industry, agriculture, international trade, etc., for individuals and business firms interested in economic developments in Chile.
Write: Corporacion de Fomento de la Produccion, Suite 5151, One World Trade Center, New York, N.Y. 10048.

New Tax-Free Trade Zones of the World. By Walter H. and Dorothy B. Diamond. $50.
Discusses the benefits and services of 166 free trade zones in 36 countries, including the United States, where 25 foreign trade zones have been established since enactment of the 1934 Foreign Trade Zones Act. It notes, for example, that more than 100 firms warehouse or process goods in Foreign Trade Zone No. 1 at New York. Port Everglades, No. 25, is scheduled to begin operations this year. Each of the trade zones is treated in a complete chapter, with facts easy to find.
Write: Matthew Bender & Co., Inc., P.O. Box 989, Dept. D. M., Albany, N.Y. 12201.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about upcoming trade exhibits and trade missions, licensing and joint venture proposals, opportunities to sell to foreign enterprises, visiting buyers, and details on major construction and expansion projects.

U.S. Promotions Abroad

For more facts on these and other U.S. exhibitions write: Director, Office of International Marketing, Rm. 4015, U.S. Department of Commerce, Washington, D.C. 20230. For trade missions: Rm. 6051, U.S. Department of Commerce, Washington, D.C. 20230.

Building Construction Equipment and Supplies Catalog Exhibition. Sudan and Nigeria. Aug. 2-9. Nigeria's $49 billion national development plan now under way includes plans to build 150,000 primary schools, 800 secondary schools, four new universities, 1800 primary health centers, and a communications center, roads and utilities. In the Sudan, new hotels and tourist lodges have previously constituted the main building construction activity, but beginning in June, the country's new Six-Year Economic and Social Development Plan will be implemented to complement the industrialization of agriculture by providing new processing plants for cotton, tea and coffee, and a major investment in basic services in hospitals, schools and housing. Catalog Exhibitions Section, 202-377-3973.

Chemical / Petrochemical Production Equipment Catalog Exhibition. Korea and Taiwan. Aug. 8-19. Both countries have established strong and buoyant chemical and petrochemical industries in the last 15 years. Approximately 80 percent of the equipment needs of Taiwan's petrochemical industry is imported. U.S. manufacturers enjoy 30 percent of this market, totaling about $20 million annually, involving mostly industrial process controls and instrumentation. A spectacular three-fold increase is noted in U.S. exports to Korea—principally control instruments and valves—from 1974 to 1975, when sales rose from $1.3 million to $3.85 million. Catalog Exhibitions Section, 202-377-3973.

Graphic Industries Equipment Exhibition and Seminars. U.S. Trade Center, Mexico City. Aug. 15-19. The sales outlook for printing and graphic arts equipment in Mexico is very good. An extensive market survey identifies a diversified list of graphic equipment with best sales opportunities through 1981. Cumulative import sales for the next five years are estimated to top $264 million, a healthy annual growth rate of 15.5 percent. Sales by U.S. manufacturers will double and reach $41.1 million in 1981, for a market share of 57.8 percent. In 1976, Mexico imported an estimated $38 billion worth of graphic equipment. Over 50 percent, or $20.7 million, was U.S. Although there is increasing competition from European manufacturers, the outlook is for U.S. manufacturers to retain and strengthen their share. The Mexican graphic industry is interested in new technology and replacement equipment to modernize, improve efficiency, and reduce costs. Equipment such as typesetting and typemaking, printing, bookbinding and photographic will continue to offer strong sales prospects. Dan Chambers, 202-377-4463.

Metalworking Machinery and Equipment (METALQUIPOS '77). Caracas. Aug. 29-Sept. 3. A 50 percent annual growth is expected over next three years in U.S. sales of metalworking machinery to Venezuela as that oil-rich country begins to invest $13 billion in metal-producing, automotive, tractor, ship repair, and home appliance industries. Exhibitors will receive full range of marketing services, including booth design and construction, VIP reception, extensive market promotion campaign. Hans J. Amrhein, 202-377-2332.

CHEMISTRY '77. Moscow. Sept. 1-15. The 10th Soviet Five-Year Plan (1976-80) stipulates increases in industrial production of 35-39 percent and a growth rate in the chemical/petrochemical industry of 60-65 percent—50 percent higher than that of industry overall. The Soviets are placing top emphasis on agricultural chemicals to help boost farm output. Heavy concentration is planned on increasing fertilizers, insecticides, herbicides and other plant-protection chemical products. In addition, the plan calls for satisfying consumer needs. These include increases in production of synthetic resins and fibers, plastics, synthetic rubber and tires, magnetic film, electrical insulating materials, cleaning materials, textile dyes, polymer additives, plastic wraps, and other packaging materials. Call Tony Bilecky, 202-377-2801.

Design Engineering Catalog Exhibition, at "Des/Japan '77." Tokyo. Sept. 2-6. Will feature catalogs of U.S. companies offering: design management services; mechanical and power transmission components; fluid power components; fasteners; electrical and electronic power and control; materials, coatings and finishes; shapes and forms; engineering instruments and other elements related to design and construction for this large OEM market. The last Commerce participation in this event, September 1975, generated nearly 800 product inquiries for the 232 American participants. Catalog Exhibition Section, 202-377-3973.

General Industrial and Agricultural Equipment. U.S. Exhibition at 33rd Plovdiv International Fair. Sept. 3-10. Agriculture, a vital sector in the Bulgarian economy, will expand 20 percent during the new plan period (1976-80). A full range of farm equipment is desired. Substantial potential demand exists for U.S. industrial equipment and high technology products such as materials handling equipment, machine tools, automated equipment, and all classes of multiple operation machines superior to European equipment. Reginald Beckham, 202-377-2802.

Hotel, Institutional and Restaurant Equipment Exhibition. U.S. Trade Center, Taipei. Sept. 5-9. This market will expand rapidly over the next five years. Research indicates that food preparation and service equipment, administrative service equipment, furniture and decor, and security and safety equipment will expand from $329 million in 1976 to $402 million in 1979. The hotel sector will receive great momentum from $153 million in government expenditures on tourism over the life of the Six-Year Development Plan. William W. Zamula, 202-377-4227.

Electronic Industry Production and Test Equipment Exhibition. U.S. Trade Center, Mexico City. Sept. 6-9. Rapid sales growth of electronic components, radio and TV receivers and communications equipment has made Mexico one of the top ten foreign markets for EIPT equipment. Exclusive of the border industries program, Mexican demand for EIPT equipment has grown 10 percent annually and is projected to rise to $17 million by 1979. Some $14 million of this demand will be met by imports. U.S. manufacturers of this equipment command a 70 percent share of Mexico's total EIPT imports. Mary R. Wiening, 202-377-2313.

Computer and Peripheral Equipment Catalog Exhibition, at "INELTEC Fair." Basel. Sept. 6-10. The Swiss market for this equipment is expected to maintain an annual increase of 9 percent for the remainder of the decade, reaching $175 million in 1980. Imports constitute most of this market. U.S. exports of this equipment to Switzerland were approximately $45 million in 1975 and are projected to rise to around $70 million by 1980. Sales of mini-computers and peripherals are most dynamic, with the former expected to almost double between 1975 and 1980. Exceptional demand is anticipated for advanced entry, output and storage devices, as well as terminals. Sales of small, medium and large computer systems will chiefly represent demand for replacement and modernization of existing installations. It is estimated that 400 new systems will be added in the latter half of the decade, with an estimated annual replacement volume of 200 to 300 sys-

tems within the same period. The INELTEC Fair is one of the largest in Europe and is expected to draw well over 30,000 visitors. Catalog Exhibitions Section, 202-377-3973.

Advanced Medical, Surgical, and Dental Equipment—Brno Engineering Fair. Sept. 14-22. Czechoslovakia plans to upgrade the level of medical services to its general population through 1980. Advanced medical research equipment, examination and diagnostic instruments, blood and organ analysis instruments, sophisticated surgical equipment, advanced life support systems, and radiological diagnostic and treatment equipment all have good potential. Gary Roberson, 202-377-3376.

Process Control and Instrumentation Exhibition, U.S. Trade Center, Sao Paulo. Sept. 16-21. The Brazilian market for industrial process control equipment has shown remarkable growth in the past and should maintain a strong pace. Brazil imports 90 percent of this equipment, and the U.S. enjoys a 50 percent share. Between 1973 and 1975 imports doubled from $24 to $48 million. Forecasts for 1978 estimate total imports of $60 million. Bill Vigneault, 202-377-5427.

Building Products and Systems Exhibition and Seminar. U.S. Regional Trade Center, Singapore. Sept. 19-23. Total imports of building and construction products and equipment into Singapore increased over two times from 1972 to 1976. Projections indicate another two-fold gain by 1980, with the market reaching $1.7 billion. Imports of building products and systems have followed the same pattern, more than doubling from 1972 to 1976, and seen totaling almost $1 billion by 1980. U.S. exports of special building materials and equipment are expected to increase phenomenally due to regional and local affluence and sophistication and the quality, standards, variety and modernity of U.S. manufacturers. Contact J. Lee Barnes, 202-377-3893.

Air and Water Pollution Control Technical Sales Seminar. Austria, Poland and Hungary. Sept. 19-30. All three countries have policies which aim at upgrading air and water quality. Best sales prospects for U.S. firms include biological water purification systems, scrubbers and precipitators to remove pollutants from smoke stack emissions, water quality control systems, equipment to measure air quality and pollution from automobile exhausts, and instrumentation. Alice Clark, 202-377-2348.

Instrumentation Catalog Exhibition at "HET Instruments Fair." Amsterdam. Sept. 21-29. The Netherlands is an excellent market for all four categories of instruments and related equipment being promoted at this exhibition: scientific and industrial laboratory instruments; biomedical and clinical instruments; process control instruments; and electronics industry production and test instruments and components. Imports supply about half of the Netherlands' instrumentation requirements. The U.S. is one of the leading exporters of this equipment to Holland, especially in electronics industry production and test equipment, where we supply over half of the total market. The greatest increase among these four categories is in process control instrumentation, which is projected to hold at a steady increase of 15 percent per year. The HET Instruments Fair is expected to draw close to 50,000 visitors from all over Europe. This catalog exhibition provides an inexpensive means for U.S. manufacturers to test the strong Dutch market and to gain exposure throughout Europe. Catalog Exhibitions Section, 202-377-3973.

SPOGA 77—Sporting and Camping Equipment. Cologne, Germany. Sept. 25-27. Considered the world's major international exhibition for sporting and camping equipment. SPOGA 76 hosted more than 1,915 exhibitors from 35 countries and, in only three days, attracted 42,800 trade visitors from 70 countries. Commerce's pavilion will accommodate 40 U.S. manufacturers. Loretta Allison, 202-377-3748.

Automated Construction Seminar Exhibit. U.S. Commercial Office, Moscow. Sept. 26-30. The 10th Soviet Five-Year Plan (1976-80) calls for increased mechanization in all phases of construction, particularly in finishing operations. Construction of at least 545 million sq. meters of housing, and schools to accommodate an additional 8 million children, is planned. Output of building materials is to increase by 30 percent. Area of greatest Soviet interest is equipment and technology to improve methods of construction with concrete and beautify results. Also of interest is equipment for finishing work, light protective exteriors, thermal insulation materials, floor coatings, and restoration of buildings damaged by earthquakes. Jim Robb, 202-377-4810.

Advanced Business Equipment and Systems Exhibition. U.S. Trade Center, Tokyo. Sept. 26-30. The Japanese market for such products was $975.5 million in 1974, and the forecast for 1979 is $1.5 billion. Japanese imports are estimated at $208 million for 1979, of which the U.S. share will reach $125 million. Featured will be labor-saving office equipment and systems which save time, cut costs, accommodate the Japanese shift to multinational enterprise and meet the exacting demands of the expanding Japanese information processing community. Robert Levine, 202-377-4379.

Quality Control and Materials Test Instrumentation Exhibition. U.S. Trade Center, London. Sept. 26-30. The U.S. presently enjoys a market share of over 25 percent of this $80 million market, which is expected to rise to almost $100 million by 1979. General product categories which hold excellent market potential include spectroscopy and chromotography, physical properties testing and inspection instruments, electro-chemistry analytical instruments, optical analytical instruments, thermoanalysis instruments and other related quality control and materials test instruments. A Technical Seminar will also be conducted in conjunction with the exhibition. Contact John L. Wolf, 202-377-3459.

Telecommunications, Radio and Television Equipment Exhibition. Caracas. Sept. 26-Oct. 1. Venezuela, because of expanding requirements for imported telecommunications equipment, offers an attractive market. Apparent consumption of telecommunications equipment in Venezuela in 1976 was $172 million, projected to grow to $222 million by 1979. Hans J. Amrhein, 202-377-2332 or 4831.

Metalworking & Finishing Equipment Catalog Exhibition, at "Index '77." Athens. Sept. 26-Oct. 2. Greece imports nearly all its metalworking machinery and parts. Total imports of this equipment have nearly doubled since 1971, with the U.S. share increasing more than tenfold. Major industries using this machinery are shipbuilding, automotive, electrical equipment and appliance, and metal construction and fabrication. "Index '77" is the only specialized mechanical engineering and equipment trade show in Greece. A total of 23,000 visitors, composed of executives and technicians from commerce and industry and a good cross section of Greek distributors and dealers, attended last year. Offers a unique opportunity for U.S. firms to assess and establish contacts in the growing Greek metalworking, machine tool and mechanical engineering fields. Catalog Exhibitions Section, 202-377-3973.

Food Processing and Packaging Equipment Exhibitions. U.S. Trade Centers, Paris, Sept. 27-30; Milan (off-site, in conjunction with IPAK-IMA international trade fair), Oct. 3-9. Just completed research in both markets indicates excellent marketing opportunities for a wide range of food processing and packaging equipment. Total sales in these sectors are expected to grow far more rapidly than the national economies as a whole, as buying habits continue to change. In France alone, sales of food processing equipment will be over $600 million and sales of packaging equipment over $300

Foreign Buyers Coming

Contingents of business executives from abroad will attend five major U.S. trade shows this fall, especially invited by U.S. Foreign Service officers in their countries and specifically welcomed at the shows by Commerce Department international trade specialists.

This activity under the Commerce Foreign Buyer Program will take place at the following exhibitions:

NAFEM-77, National Association of Food Equipment Manufacturers Show at the Superdome, New Orleans, Sept. 24-27. About 380 foreign visitors are expected in a total attendance of 10,000.

INTELCOM '77, World Communications Exposition at the Georgia World Congress Center, Atlanta, Oct. 9-15. About 2,500 of the 8-10,000 attendees may be from outside the U.S.

Building & Construction Exposition and Conference, sponsored by the Producers' Council, Inc., at McCormick Place, Chicago, Nov. 1-3. Of the 15-20,000 trade visitors, about 750-1,000 are expected from abroad.

Automotive Parts & Accessories Show, sponsored by the Automotive Parts and Accessories Assn. at McCormick Place, Chicago, Nov. 15-17. About 700 foreign visitors are looked for in a total trade attendance of 13,000.

Chem-Show '77, the 36th Exposition of Chemical Industries, at McCormick Place, Chicago, Dec. 5-8. Some 800-1,000 foreign visitors will be a part of total trade attendance of 20,000.

million by 1980-81, around half of this imported. Thanks to our favorable competitive position in this area, the U.S. share of the market is expected to double over the next few years. Will allow participants to obtain maximum exposure with minimum of travel expense and time. Companies may participate in either or both. David Katz, 202-377-4104.

Hotel & Restaurant Equipment Catalog Exhibition. Singapore, Malaysia & Thailand. Oct. 3-12. The rise in tourism in the Far East has created a need for expansion of hotel and restaurant facilities. Singapore currently has more than 10,000 hotel rooms, yet occupancy rates are more than 90 percent during peak periods and 75 percent during the rest of the year. Malaysia has benefitted from the overflow from the traditional tourist routes, but is unable to handle any further increase. Although Thailand, with 15,000 first-class or deluxe rooms, has been popular for some time, there are plans for expansion of five existing hotels and 18 new hotel projects, for an additional 4,170 rooms. Catalog Exhibition Section, 202-377-3973.

Process Controls Seminar Mission. Kuwait, Saudi Arabia and Syria. Oct. 3-19. Will highlight the efficiency and quality control aspects of U.S. process control technology as applicable to host country needs. Saudi Arabia's $142 billion economic development plan (1975-1980) has created many opportunities for U.S. suppliers of process control equipment. U.S. exports of such equipment to Kuwait doubled from 1974 to 1975, reaching about $800,000. Aside from excellent sales prospects in the petroleum and petrochemical industries, other prime industrial buyers include natural gas, power generation, water resources and treatment, heavy industry (steel, rubber aluminum) and telecommunications sectors. Arthur J. Laemmerzahl, 202-377-3741.

Tandem Micro/Mini Computer Equipment Exhibitions: U.S. Trade Center for Scandinavia, Stockholm, Oct. 10-12; and Systems '77, U.S. Pavilion, Munich Fairgrounds, Oct. 17-21. These two major exhibitions of significant importance to the European market feature micro/mini computer systems, peripherals, software and services. They are timed to permit companies to take part in both. Sweden is one of Europe's most significant growth markets for such equipment. SYSTEMS '77 is the largest single computer exhibition in Europe, and will provide access to the world's third largest market for micro/mini computers and related equipment. Contact Dwight L. Umstead, 202-377-4414.

Stereo/Hi-Fi & Home Appliances. U.S. Trade Center, Tehran. Oct. 16-20. This will be the first U.S. consumer oriented show to be promoted in the Middle East. Given Iran's limited production capabilities in this field, imports of these products should reach an estimated $300 million in 1980. Scheduled at an opportune time for U.S. manufacturers to take advantage of this impressive demand, generated largely by changing tastes and escalating income status among many of Iran's 34 million. Karl Reiner, 202-377-2952.

Water Resources Development Seminar Mission. Nigeria, Kenya, Senegal. Oct. 16-28. More than $5 billion is expected to be spent under the Senegal River Basin Development Plan for dam building, water desalination, irrigation and water supply projects. Approximately $3.6 billion has been allocated by Nigeria for the purchase and development of water and sewer systems, semi-arid land development and water transport. Under current development programs, Kenya has allocated over $350 million to be spent between 1978-81 on irrigation, desalination, improvements in existing pipelines, installation of new urban and rural water supply systems. In addition, the U.S. Embassy in Nairobi reports that Kenya's new development plan, to begin in 1978, will place strong emphasis on dry-land irrigation and optional water resource management. Products identified as having excellent sales potential are: water tanks, self-propelled irrigation systems, water well drilling rigs, irrigation pipe, waste and water treatment systems, instrumentation, engineering and consulting services. Participation will be limited to seven U.S. firms. Bob Bucalo, 202-377-3741.

Garment Machinery Seminar Exhibit. U.S. Commercial Office, Moscow. Oct. 17-21. Under the 1976-1980 Five-Year Plan, the Soviets emphasize their aim of more fully satisfying growing consumer demand. Items of specific interest in garment manufacturing are systems for automated garment designing; automatic systems for cutting patterns; materials handling equipment for production lines; equipment for pre-cutting shops; systems for processing different types of garments; equipment for adding zippers, buttons, etc.; semi-automatic and digital automatic sewing machines; garment finishing equipment; steam pressing equipment; and packaging equipment. Call Jim Robb, 202-377-4810.

Printing and Graphic Arts Exhibition. U.S. Trade Center, Sao Paulo. Oct. 17-21. U.S. graphic industries exports to Brazil grew by 21 percent between 1973 and 1975, from $16.4 to $19.9 million. Brazilian printers have a reputation for emphasis on high quality production, latest technology and quality control. The graphic industry should continue to grow at about a 10 percent rate, as firms expand the variety of work done in a move to meet rising costs of labor, paper and supplies. G. Lincoln McCurdy, 202-377-5427.

Plastics Production Seminar Mission. Venezuela and Colombia. Oct. 17-28. The plastics industry is one of Venezuela's most dynamic growth industries. In 1975, its output reached $276 million. In the first nine months of 1976, the U.S. exported over $6 million in equipment and $24 million in plastic materials to Venezuela. The plastics industry in Colombia is relatively new. In 1976, Colombian industrialists purchased $6 million in processing equipment. U.S. exports of synthetic resins and plastic materials exceeded $11 million during the first nine months of 1976. Under the Andean Pact, Colombia was assigned responsibility for development of plastic forming machinery; however, this objective cannot be achieved without substantial technical assistance. In both countries, there is heavy demand for new techniques and equipment for injection molding; extrusion molding; blow molding; compression molding; rotational molding; and calendering. Jonnell Jacobson, 202-377-4918.

Building Products and Construction Equipment Trade Mission. Egypt, UAE and Qatar. Oct. 21-Nov. 2. Abu Dhabi and Dubai (the major emirate states of the UAE), blessed with abundant oil revenues, offer attractive market opportunities for U.S. suppliers of building products and construction materials. The $100 million in construction-related U.S. exports to the UAE in 1976 reflects the importance of this market sector. The rate of private building starts is likely to rise again as development of new industrial areas in Abu Dhabi and Dubai necessitate construction of single-family housing. In mid-1976, $4.8 billion worth of Qatari construction-related projects were in progress or contemplated. The largest project is a $2 billion-plus scheme to exploit, transport and process Qatar's immense natural gas reserves. Egypt is currently making extensive plans to build and improve its roads, transportation systems and industrial capacity. U.S. suppliers providing advanced techniques or new technology will do particularly well in Egypt. Geoffrey H. Walser, 202-377-2973.

Offshore Oil Exploration, Drilling and Extraction Equipment and Technology Technical Sales Seminar. Poland, Romania and Bulgaria. Oct. 24-Nov. 4. All three countries, faced with declining oil reserves, high prices on imported oil, and rapid increases in demand for energy, are planning to step up exploration for offshore oil. Products with high sales potential include: jack-up drilling rigs with spare parts, floating drilling platforms, drilling vessels, automation and control equipment, high pressure air injection equipment, and material handling equipment used in offshore oil exploration, drilling and extraction. Alice Clark, 202-377-2348 or 4810.

AGRIQUIP '77. Jakarta. Oct. 31-Nov. 4. This market is expected to more than double to approximately $50 million by 1980. The Indonesian Government is giving priority attention to agriculture, i.e., the reduction of food imports and increase of export earnings from agricultural and processing operations, together with implementation of the Second Five-Year Plan, which allocates $2.4 billion for these purposes. Imports of agricultural equipment (excluding forestry) are expected to rise from $7 million in 1975 to $17 million in 1980. Indonesian authorities seek to process domestically 40 percent of the country's 22 million cubic meters of timber products in the next few years in order to increase export value by processing, tap emerging opportunities in Europe for sawn timber, and reduce Indonesia's dependence on the Japanese market. Logs comprise about 90 percent of total exports, valued at more than $700 million in 1976. Imports of timber production, handling and processing equipment are expected to rise from $14 million in 1975 to more than $30 million in 1980. Contact Ronald McCowen, 202-377-3560.

Computer Software Trade Mission to Japan. November. Japan is the second largest computer market in the world. Expenditures by the manufacturing sector alone on computer hardware were estimated at nearly $1 billion in 1976. It is believed that on-line terminal equipment will spread rapidly—mainly in those sectors needing more efficient data processing, such as the financial community, insurance companies, service industries, etc. By the end of 1985 there will be a total of over 100,000 multipurpose computers in operation and the software industry will register a total

of some $1.1 to $1.7 billion in sales. The Japanese software industry, nevertheless, is relatively underdeveloped when compared to the U.S. industry. In recognition of this, the Japanese Government has just liberalized controls on foreign activity in the software industry. Previously, it was virtually impossible to import software into Japan, so only now is the market open to U.S. software packages. In addition, Japan's Patent Office adopted evaluation standards in 1976 allowing for certain types of computer software to be patented, making Japan the first of the developed countries to take up the problem of patents for software. Wanda Ale, 202-377-3119.

Geothermal Energy Development and Applications Seminar Mission. Costa Rica, Guatemala and Mexico. Nov. 2-16. Major marketing opportunities exist for U.S. companies interested in aiding Mexico, Central America and Panama in utilizing their extensive geothermal resources and at the same time in increasing U.S. exports and developing the domestic U.S. industry. Over $200 million is expected to be spent during the next decade in this region to develop geothermal energy resources. U.S. companies interested in developing opportunities in this market contact Walter Bastian, 202-377-4756.

Rehabilitation USA—Aids to the Handicapped and the Disabled Exhibition and Technical Seminar. U.S. Trade Center, Tokyo. Nov. 7-11. The United States is recognized as a world leader in the field of rehabilitation, and yet many advanced American products and technologies are virtually unknown overseas. This event, the first in this field mounted by the U.S. Government and the first such show held in the Far East, will enable U.S. firms to enter the growing international rehabilitation market. It is estimated that there are more than 500 million handicapped persons worldwide. The rehabilitation market in Japan alone should reach $277 million by 1980. The exhibition will feature five major product/technology categories: orthotics and prostheses; architectural/transportation and mobility; physical and occupational therapy; sensory aids/adaptive systems; and educational/training systems. A prestigious technical seminar will be the forum for a healthy exchange of information. Contact Irwin Nathanson, 202-377-4390.

Electronic Components Exhibition. U.S. Trade Center, London. Nov. 7-11. The U.K.'s present consumption of electronic components is $1.2 billion, while imports reached $488 million in 1976. The rate of growth of U.S. exports to the U.K. over the next three years is forecast at 23 percent per year. U.S. exports represented 35 percent of 1976 imports. American-made equipment is sought for its advanced technical sophistication and reliable delivery times. Robert Connan, 202-377-3465.

Tandem Exhibitions: Electronic Production and Test Equipment, U.S. Trade Center, Paris, Nov. 14-17; Productronica '77, Munich Fair Grounds. Nov. 22-26. U.S. manufacturers may exhibit at either or both shows to increase their share of a Western European market expected to reach $343 million this year. The Paris Trade Center staff will arrange shipment of exhibit material from Paris to Munich in time for the opening of Productronica '77. Contact Don C. Schmadel, 202-377-2920.

Mining and Material Handling Equipment Exhibition. U.S. Trade Center, Sao Paulo. Nov. 22-26. Brazil is one of the world's largest repositories of mineral wealth. Massive exploitation is planned between 1978 and 1980 by the Brazilian Government to improve the country's balance of payments. This will offer U.S. manufacturers of mining and materials handling equipment an outstanding export sales opportunity. U.S. exports to Brazil of mining equipment in the period 1973-75 jumped from $50 to $85 million, an increase of 70 percent, and the trend is continuing. Best sales prospects are in exploration, underground, and open-pit mining equipment. Other categories include electronic control systems and communication equipment. Sam Dhir, 202-377-5427.

Lagos International Trade Fair. Nov. 27-Dec. 11. The Nigerian $50 billion Third National Development Plan (1975-80) makes provisions to improve many inadequacies in economic development. Among areas given primary importance are agricultural development, improvement of the communications network, building and road construction. The Plan allocates $3.6 billion for strengthening of the agricultural sector. There is no local production or assembly of agricultural equipment. Imports are expected to reach $50 million by 1980. Expenditures on expansion of the telephone and telegraph system alone represent a potential market of over $1 billion between 1975 and 1980. Virtually all communications equipment must be imported. Nigeria's rapidly increasing population, as well as its expanding economy as a result of mounting income from oil revenues, has created a boom in the building and construction industry. Reginald F. Biddle, 202-377-4564.

Printing and Graphic Arts Equipment Exhibitions. U.S. Trade Centers: London, Nov. 28-Dec. 1, and Stockholm, Dec. 6-9. Designed to feature a broad range of equipment with good sales potential in the U.K. and Scandinavian markets. Market research recently conducted in the United Kingdom and Scandinavia has identified opportunities for U.S. producers of printing and graphic arts equipment. In the United Kingdom, the level of investment in 1976 in graphics industry equipment reached $88.0 million; it is expected to increase 36 percent to $119.7 million in 1981. In Scandinavia, also a dynamic market, sales are expected to increase by approximately 27 percent to $175 million in 1981. These tandem exhibitions offer cost-conscious executives attractive opportunities to exhibit in two major European markets. While tandem participation offers a distinct marketing advantage, you can elect to participate in either one or both exhibitions. William G. Stepp, 202-377-4602.

Hospital & Medical Equipment Exhibition. U.S. Trade Center, Taipei. Nov. 28-Dec. 2. Features high technology machinery, equipment, systems, fixtures and technical support supplies for a wide range of medical, surgical and health-care industry requirements on Taiwan. Growing numbers and constant upgrading of hospitals, institutions, clinical labs, medical centers, research centers, mobile & rural health-care/screening centers, emergency centers and vehicles point to the value of this event. A recent market study projects that by 1980 U.S. suppliers will enjoy almost $6.5 million in direct sales to Taiwan for the specific products in this event theme. Equipment in demand includes: cardiological, pulmonary, pediatric, renal, neurological, ophthalmological, operating suite, emergency room, intensive-care patient monitoring & support, clinical lab testing/processing/analyzing/recording/data systems for management control & support. Dave Horridge, 202-377-2798 or 5545.

Electronic Data Processing Seminar Mission. Algeria, Tunisia and Syria. December. The rapidly emerging economies of North Africa and the Middle East are looking to U.S. EDP technology as a vehicle to facilitate and implement their ambitious development programs. The Algerian EDP community considers itself capable of absorbing the full impact of the latest technology and considering it for implementation. Use of computers in Tunisia is growing. The Tunisian Government is adopting modern systems analysis techniques which will certainly bring in more than the 50 medium-to-large computers now operating in Tunisia. Syria is beginning to enter the computer age and the country is showing signs of making greater investments in computer technology. Computers have the potential for wide across-the-board application throughout the developing Syrian economy. Geoffrey H. Walser, 202-377-2973.

Building Materials and Equipment Exhibition. U.S. Trade Center, Tehran. Dec. 4-8. The Iranian Government is committed to an intensive housing construction program that offers excellent opportunities for U.S. firms in the areas of building materials, prefab components, plumbing, fixtures, hardware, tools, and related equipment. Some $3.4 billion has been allocated for the construction of 800,000 housing units during the 1973-78 period. Plans call for 3.7 million housing units to be built by 1991. The market for building and construction materials and equipment is growing at an annual rate of 35 percent. Call Bill Monroe, 202-377-2952.

Business Equipment, Computers and Peripherals Exhibition, Caracas. Dec. 5-10. The Venezuelan market for business equipment is expected to grow at an average rate of 28 percent during the 1976-79 period, a pace which will boost annual consumption from $67 to $140 million. Demand will be fueled by a rapid expansion of government services and accelerating modernization of business practices—both stimulated dramatically by substantial recent increases in oil revenues. Venezuela depends almost entirely on imports for business equipment and U.S. manufacturers are by far the leading suppliers to the market. Imports from the United States are expected to double from $41 million in 1976 to $88 million in 1979. Hans J. Amrhein, 202-377-2332/2995.

Computers and Peripheral Equipment Exhibition. U.S. Trade Center, London. Jan. 16-20. Great Britain represents one of the largest single markets for U.S. computers and peripheral equipment. The British computer market in 1975 was estimated at over $700 million and is expected to reach $1.2 billion by 1980, with the U.S. share anticipated to be well over 60 percent. U.S. sales of large, medium and small computers should continue to rise, while mini-computers and peripheral hardware follow a much steeper upward trend. Mini/micro computers also offer outstanding sales opportunities. John L. Wolf, 202-377-3459.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1033, U.S. Department of Commerce, Washington, D.C. 20230. WTDR request forms may be obtained from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

1500—KOREA—Newly formed construction affiliate of a major Korean conglomerate seeks joint ventures, technology agreements with **U.S. engineering/construction companies.** Concern will focus its initial activity in undertaking contracts in Middle East. It plans to be technology intensive operation, will concentrate on plant construction, rather than roads, ports. Wants to joint venture on specific projects under some type of semi-permanent relationship. Construction subsidiary is capitalized at $1.5 million, additional financing is available from parent group. Representative is prepared to visit U.S. to follow up preliminary contacts. Oh Buyng-Hun, Mng. Dir., Samsung Construction Co., Room 1901 Dong Bang Bldg., 2-250, Tai Pyung Ro, Chung-Ku, Seoul. WTDR. P-77674. OPIC.

1522—SAUDI ARABIA—Seeks joint venture to construct **80-room motel** north of Jidda, valued at $4.2 million. Firm claims that this will be Saudi Arabia's first motel, with land, facilities aimed at truckers as well as other guests. Motel has been designed by German firm; land has been obtained and project approved by Saudi Government. Saudi company seeks American partner willing to invest half of capital and manage motel; Saudi firm will contribute the other half. Supplementary material, details may be obtained from Saleh Ali Saeedi, Dep. Mng. Dir., International Trading Establishment, P.O. Box 5778, Jidda. Cable, SHIPHASHIM; telephone, 51081, 50015. P-77706. OPIC.

2022—ISRAEL — Manufacturer of margarine, processed cheese, soups, mayonnaise seeks know-how for production of **hard cheese** made from reconstituted milk produced solely from skim milk powder. Company is part of Koor Industries Ltd., Israel's largest local industrial concern controlled by Histadrut. Company employs 220. Shmuel Ninio, Research & Development Mgr., Mata Food Industries Ltd., POB 160, Hadera. P-77675. OPIC.

2452, 3448—BOTSWANA—Seeks licenses to build **geodesic domes for use as housing.** R. J. C. Taylor, Mng. Dir., Design Drawing Services (Pty.) Ltd., P.O. Box 215, Gaborone. Telephone: 71158. P-77689. OPIC.

2452—PORTUGAL — Seeks licenses to manufacture **prefabricated wood buildings.** Firm has marine pine and hardwood sawmills, kiln drying plant; produces plywod, veneer. Seeks know-how, technology to expand, diversify its production and sales in Portugal and perhaps EEC, EFTA area. Company has 147 employees, annual sales of $8 million. Antonio Augusto Ferreira Melo, Melo & Ca., Lda., Estrada Monte Godim, Leca da Palmeira. Telephone: 9951246. P-77676.

2600—AUSTRIA — Seeks licenses for **manufacture or conversion of products, in which major element in value is wood-free paper.** Firm is a leading producer of bleached sulfite pulp, wood-free paper. Also makes writing tablets, envelopes, other paper. Employs about 1,400. Main production facilities have yearly capacity of 125,000 tons of first quality wood-free coated and uncoated papers for various end users. Exports throughout world. Interested in diversifying production to include certain consumer goods, based on wood-free paper, pulp and their by-products. Herber Vogel, Mng. Dir., Borregard Oesterreich A.G., Postfach 61, A-5400 Hallein. WTDR. P-77705.

2650—ISRAEL—Seeks license or joint venture to utilize advanced methods of **packaging foodstuffs** such as sugar, flour, pudding in powder and liquid form, and produce **composite carton containers for automotive oil.** Old established firm presently manufactures paper bags, envelopes, carton tubes, other paper products. Employs 48. Itzhak Roth, Mgr., Daroth (1963) Ltd., P.O.B. 1053, 7 Shapira St., Ramat Gan. WTDR. P-77677. OPIC.

2851—AUSTRIA—Seeks license to manufacture **flame chute paints and flame chute materials.** Firm is medium-sized manufacturer of special chemicals for surface treatment such as paints, abrasives. P. Plaut, Hetzendorfer Str. 19, A-1125 Vienna. Economic/Commercial Section, U.S. Embassy, 1X Boltzmanngasse 16, A-1091, Vienna, requests that it receive information copies of inquiries sent to J. Plaut. P-77697.

2851—GERMANY — Seeks to exchange technology via cross licenses in **field of high-quality paint/lacquer for use in machine and apparatus construction industry, including stove paint lacquer and annealing lacquer.** Founded 1895, firm has 150 employees. Company official plans to visit U.S. in near future. C. Alexander Grau, Pres., Mankiewicz Gebr & Co. Lack und Farbenfabrik, George Wilhelm Str. 189, 2102 Hamburg 93. Telephone, 751513; telex, 2163452. P-77678.

2874—TOGO — Seeks collaboration with U.S. firm, including investment, to establish **fertilizer plant in association with current phosphate rock mining activity.** Son Excellence Monsieur Koudjolou Dogo, Ministre Du Plan, Developpement Industriel et Reforme Administrative, Lome. P-77679. OPIC.

2879—AUSTRALIA—Seeks collaboration with U.S. firm to produce **home garden products including plant foods, potting soils, composts, insecticides,. plant care items.** Firm will consider licensing agreements or joint manufacturing and marketing arrangement. D. J. Glanville, Kiwi Australia Ltd., P.O. Box 286, Clayton, Victoria, 3168. P-77680.

3069—AUSTRALIA — Small firm claims to have developed patented, room temperature, fluid (solvent) virtually pollution free process for **recycling used vehicle tires, other rubber products into reusable granules.** Firm is interested in licensing U.S. manufacturer for U.S. and attracting equity investment in Australia plant. John Dobozy, Mng. Dir., Build Australia Pty. Ltd., Walk Arcade, Surfers Paradise, Queensland, 4217. WTDR. P-77707.

3079—CHILE — Seeks license agreement with U.S. firm to **produce complete line of plastic ducts, reinforced for sewerage, electric cable, telephone applications.** Established 1935, company employs 68; is country's second largest manufacturer of prefabricated cement tubes for sewer, telephone ducts. Wishes to change its product line from cement to plastic. Eduardo Hasbun, principal owner of E[illegible]uardo Hasbun y Cia. Ltda., plans to travel to U.S. first part of July. Interested firms may contact him at 100 Marion St., Apt. 42, Brookline, Mass. 02146. Telephone, 617-277-5914. P-77699. OPIC.

3079—GERMANY — Seeks cooperation agreements with small- to medium-size U.S. manufacturing firms to **broaden its distribution line of plastic products.** Firm distributes food packaging materials, protective garden mesh, tree sleevings, perforated sprinkler hoses, other specialty garden accessories. Is also interested in specialty plastic products for industrial use such as filters, gas piping, drainage systems. Established 1972, company has annual sales of $4.2 million and is subsidiary of U.K. firm. Rolf Coers, Mgr., Netlon GmbH, Postfach 320840, 4000 Duesseldorf 30. P-77681.

3079, 3861, 3841—GERMANY — Produces variety of specialized **fiberglass and plastic articles,** such as medical and sick room **cabinets, developing sinks for graphic, photographic trades, agricultural fiberglass containers.** Firm is interested in contacting American company that would be interested in exchange of know-how and licensing agreement for production of these items. Company is also interested in obtaining production or know-how agreement for manufacture or assembly of line development equipment for photographic industry. Established 1960. Karl-Ulrich Wagner, Mgr., Wagner oHG, Kunststofftechnik, Postfach 191, D-7418 Metzingen. Telephone, 7123/1044; telex, 7245349. P-77690. WTDR.

3079, 3442—SWEDEN—Seeks to acquire technology from U.S. firms, also to offer its technology for production of **metal window locking devices, self-watering plastic planters, plastic storage, handling, tote boxes.** Also interested in **molds, tools** for new items in above lines; will consider joint ventures. Established 1896,

firm makes household, industrial brushes and variety of home, office, industrial plastic products. Has 315 employees, annual sales of 40 million Sw.kr.; is controlled by State-owned Swedish Tobacco Co. Bengt Lindeblad, Financial Comptroller, Sinjet AB, S-561 01 Huskvarna. Cable: SINJET; telex, 70006 sinjet s. P-77698.

3199—KENYA — Organization with capital seeks joint venture arrangement to manufacture **leather goods.** U.S. collaborator should have experience, technical capability in manufacture, marketing of leather goods. American partner's equity is likely to be 50%. C. L. Lakhani, Dir., L. N. Lakhani Ltd., P.O. Box 40533, Nairobi. P-77701. OPIC.

3292, 3296—FRANCE — Leading French firm in energy field is seeking joint venture agreement for manufacture of **insulation materials** for energy saving. John Ferriter, Commercial Attache, Unit III, U.S. Emb., 2 Ave. Gabriel, Paris. P-77691.

3362—DENMARK — Well known Danish iron foundry offers its manufacturing facilities to U.S. manufacturers, either outright or in form of license arrangement. Company is highly mechanized grey and nodular iron foundry equipped for line production. Fields in which its production facilities are particularly applicable are manufacture of **parts for refrigerator and air compressors; valves; engine parts; hydraulic pumps, valves.** Company will also consider combined manufacturing, marketing agreement covering European market. P. E. Selsner-Rasmussen, Dir. of Mktng., De Forenede Jernstoberier A/S, DK-3300 Frederiksvaerk. Denmark. WTDR. P-77702.

3400—GERMANY—Small firm seeks licensing and/or joint venture arrangement to produce **recreational, health, body building, gymnastics and sports equipment, solaria and fitness center supplies.** Firm was founded in 1948 for production of custom tailored metal fabricated equipment, including steel furniture, restaurant, hospital supplies. Rudolf Weiner Metallbau, Raiffeisen Str. 6., D-6360, Friedberg / Hessen. Telephone: 06031-5437. P-77700.

3444—SWEDEN — Manufacturer, agent, importer of ventilation equipment seeks suppliers of additional products such as **fire dampers, fire and smoke protection equipment for ventilating systems.** Firm is interested in representation, agency or license agreements with interested U.S. companies. Representatives of Swedish firm will be in U.S. for about 5 weeks beginning June 24. They can be reached c/o Mrs. C. B. Hirreland, 10390 Main St., Apt. 2, Clarence, New York 14031. Curt Rasch, Mgr., Broderna Rasch AB, Wallingatan 3B, S-111 60 Stockholm. P-77682.

3499—GERMANY—Established manufacturer of **profiles, movement joint seals for construction industry** seeks cooperation with similar U.S. firms for exchanging licenses and/or know-how. Firm sells throughout Europe. Established 1920, employs 100. Herr Hammerschmidt, MIGUA Hammerschmidt GmbH & Co., Postfach 167, Bruegelweg 1-3, 5628 Heilgenhaus. P-77692.

3500—FRANCE — Manufacturer of lighting fixtures, accessories for machine tools, metal containers plans to diversify. Seeks licenses to produce sophisticated **food and pharmaceutical processing equipment, machine tool components and fittings, safety equipment, pollution control devices, and equipment for municipalities.** Firm is particularly well connected to machine tool industry. Employs 160, markets throughout France. M. Pierre Rougier, Pres., Societe Sermeto, B.P. 35, 03300 Cusset. Telephone, (70) 98 32 98; telex, 990 405. Copies of firm's product brochures available from Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-77683.

3500—GERMANY — Seeks licenses, joint ventures to manufacture **air conditioning, chemical, sanitary equipment, engage in sheet metal processing.** Firm presently involved in metal fabrication. Established 1863, employs 120. Georg Suchfort, Suchfort Anlagenbau KG Goettingen, Rudolf-Winkel-Str. 5, 34 Goettingen. Telephone, 0551-62091; telex, 096-738. P-77703.

3500—NORWAY—Major firm seeks licenses or joint venture to expand product line and utilize its worldwide sales organization. Is interested in manufacture of products in following areas: **pollution control, energy saving, construction machinery, offshore and petrochemical industry, safety equipment, processing and transporting within food industry, yachts and boats.** Established 1916, company is one of Europe's largest manufacturers of electric hydraulic steering gears for ships and oil rigs. Jarle Wanvik, Dir., Frydenbo Mek. Verkted A/S, POB 8, 5031 Laksevag. Telex, 42236. P-77684.

3531—DENMARK — Large manufacturer of diesel engines offers its production facilities to **U.S. heavy construction equipment companies** interested in having their products fabricated within EEC. Firm is one of world's largest producers of diesel engines, particularly marine diesel engines. Because of declining world demand for ships and consequently propulsion machinery, it now has excess production capacity. It also offers its extensive experience, know-how in manufacture, machinery, mounting of large, small constructions, single or in large series. Niels Aage Jeppesen, Asst. Dir., or Erik Holm, M.Sc., Sales Mgr., Burmeister & Wain Maskinfabrik A/S, 4 Strangdgade, DK-1401 Copenhagen K. WTDR. Copies of firm's brochure available from Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-77685.

3541—SWEDEN—Firm desires to manufacture under license or contract, and market in Sweden, **machines, machine tools, components.** Company specializes in machinery, machine parts for heavy industry, including such equipment as continuous castings, accessories for rolling mills. Its manufacturing resources include sheet metal shop, welding shop, machine shop, assembly facilities. Established 1958, employs 90. Jorgen Jansson, Hilding Hansson i Vasteras AB, Kungsara, S-725 90 Vasteras. P-77693.

3633—THAILAND—Firm planning to expand activities into electrical household appliances seeks license to produce **household washing machines.** Presently distributes woodworking machinery, pressure sterilizers. Yindee Changtrakul, Mng. Dir., Dumrong Trading Co., Ltd., 491-493 Silom Rd., P.O. Box 41, Bangkok. Cable, DUMRONG BANGKOK; telex, DUMRONG TH 2919; telephone, 2332681, 2345600. P-77686. OPIC.

3674, 3679—SWITZERLAND — Seeks to import for own use, agency representation or manufacture under license **electronic digital and linear components, display systems, control and automation equipment, keyboards, mini- and microcomputer based systems, computer peripherals.** Also seeks cross license, joint venture with American firm to distribute its industrial controls and electronic counters in U.S. P. Musallam, Eng., Erhardt & Jost Electronic, Rossligasse 2, 4450 Sissach, Baselland. Telephone: 061/98 30 30. P-77687.

3679—PHILIPPINES — Seeks contracts to **assemble microelectronic items for computers, calculators.** Firm is presently engaged in assembly of electronic products. Felipe B. Santiago, Gen. Mgr., Trident Electronic Systems & Service Corp., 1103 Quezon Ave., Quezon City. P-77708. OPIC.

3841—FRANCE—Firm is seeking licensing rights to manufacture **medical equipment using laser for brain, heart, eye, nerve surgery.** Firm has necessary technicians, engineers to install, maintain equipment. Company manufactures anti-explosive equipment for mining, chemical industries. Also manufactures medical equipment, makes electric installations for large companies and public and governmental organizations. Established 1921, employs 350. Mr. Renaud, SAIT, Societe Alsacienne d'Installations Tech-

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate nor make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such request to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

niques, 10 rue du Zornhoff, 67700 SAVERNE. Telex, 870725 F; phone, 88 91 32 21. P-77695.

3841—GERMANY — Seeks licensing or joint venture arrangement for manufacture of **pulse code modulation (PCM) instruments.** Firm develops, manufactures PCM equipment in cooperation with other firms. Walter H. Schroeder, Hesch Schroeder GmbH K.G., Max Planck Str. 73, 3057 Neustadt 1. Telephone: 05032-5377. P-77704.

7319—GERMANY — Seeks to exchange know-how, licenses for production of **display advertising systems** for top quality products in sales and show rooms. Established 1957, firm employs 90; annual sales, $4.2 million. It manufactures large variety of plastic products. Mr. Reif, Lothar Reif—Reif Hobby-Technik, Kolpingstr. 2, D-7850 Loerrach. Telephone, 7621/8036; telex, 773516. WTDR. P-77709.

7399—BRAZIL — One of few Brazilian engineering firms **specializing in quality control, physical properties testing, inspection services,** seeks U.S. joint venture partner for **expansion of its present activities.** Brazilian firm would welcome American equity, management participation of up to 70%; in return, would require investment of probably less than $2 million, technical assistance, personal collaboration of American engineers. Firm ranks high among its limited number of competitors. Its services are usually supplied to major concerns such as steel companies, hydroelectric plants, petroleum industry, heavy equipment manufacturers. It also reports openings for its services in other South American countries. Employs 180. Oswaldo Rossi, Junior, Mng. Partner, NDT Sociedade de Engenharia e Inspecao Industrial Ltda., Rua Leandro Dupre 635, 04025 Sao Paulo. P-77696. OPIC.

8911—AUSTRALIA — Engineering company seeks licenses/joint ventures in following areas: **design, manufacture, installation of major engineering projects such as road, railway bridges, water and sewage treatment plants; design, manufacture of equipment for oil, chemical industries, pressure vessels, dryers, evaporators, storage tanks, platforms, pipe racks; production of large capacity traveling gantry cranes, dredger components, conveyor homes.** Representative of firm plans to visit U.S. in late June; itinerary includes New York, Pittsburgh, New Orleans, Houston, Los Angeles, San Francisco. Firms interested in meeting with him should write: Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-77688.

Licensing In U.S.

For additional information on these investment opportunities or opportunities to manufacture foreign firms' products in the United States under a licensing agreement, write the Domestic Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-5361), referring to the appropriate file number.

Investment

AUSTRIA—Plastics. Company wants to acquire or form joint venture in U.S. with small plastics manufacturer. It will supply some capital, machinery and know-how in plastic packaging and display materials for cosmetic products. Company supplies some U.S. cosmetics companies. Paul Wampl, Plastic KG Mutter & Wampl, P.O. Box 141, A-6850 Dornbirn. File 3413.

FRANCE — Pharmaceuticals. Company specializing in effervescent type pharmaceutical products seeks to acquire small pharmaceutical company one hour's flying time from Washington, D.C. Relatively dry region preferred. Madame Bru, Laboratories UPSA, 128 rue Danton, 92504 Rueil-Malmaison. (Madame Bru will be in Washington, D.C. June 13-15, can be reached by interested parties at Hotel Madison, telephone 202-785-1000; and in New York briefly at Park Lane Hotel, telephone 212-371-4000). File 3414.

FRANCE—Yeast. Company wants to invest about $6 million in new yeast manufacturing facility in U.S. Since molasses accounts for one-third of production costs, plant must be in or near sugar beet or cane growing area. Fermentation process requires water for cooling; water released at higher temperature and potassium rich residue therein raise environmental questions. Since much of production will be for export, site should be near port with good links to Africa and Asia. Fabian LeSaffre Gerant, Societe Industrielle LeSaffre, 137 rue Gabriel Peri, 59700 Marco en Baroeul. File 3415.

GERMANY—Investments. Company acting on behalf of 3,000 clients, primarily small businessmen, interested in both direct and portfolio investments, and joint venture arrangements with small to medium-sized U.S. industrial and trading firms. Walter Schmitz, Concept-Finanz-Vermittlungsgesellschaft fuer Vermoegensanlagen mbH KG, Katterbachstr. 102, 5072 Bergisch Gladbach. File 3417.

Licensing

AUSTRALIA — Recycled synthetic rubber. Patented, room temperature, fluid (solvent), virtually pollution-free process for recycling used vehicle tires and other rubber products into reusable rubber granules. John Dobozy, Mng. Dir., Build Australia Pty. Ltd., 9 Walk Arcade, Surfers Paradise, Queensland, 4217. File 3418.

AUSTRIA — Batteries. Absolutely tight galvanic dry-cell battery in plastic cover. Kapsch AG, Wagenseilgasse 1, A 1121 Wien. File 3419.

BELGIUM — Water treatment system. Electro-physical. U.S. Patent No. 3,192,142; 3,192,146; 4,586,890. Company claims swimming pool water treated by this process does not require chemical additives such as chlorine or ozone, and water is odorless, clear, even drinkable regardless of number of swimmers. J. A. Huwaert, Commerce et Industries, European Engineering Consultants, Ave. de la Charmille 18—Bte 39, B-1200 Brussels. File 3420.

FRANCE — Food processing equipment. Continuous rotative cooker-cooler with hydraulic conveyor. Fernand Hanau, Gen. Mgr., Hanau, 75 rue du faubourg Saint Martin, 75010 Paris. File 3421.

GERMANY—Picture frames. Clipless picture holders sold under trade name "Recobloc," available in sizes up to 70 x 100 cm. Paul Reim, Owner, Mgr., Recobloc Bildhalter GmbH, Rathausgasse 5, D-7100 Heilbronn am Neckar. File 3426.

GERMANY — Coatings for fabricated steel and iron, household consumer goods and appliances, electrical equipment and machinery, automotive equipment. High heat resistant, non-stick. Hans-Harald Grebe, Mgr., Weilburger Lackfabrik J. Grebe, D-6290 Weilburg/Lahn. File 3427.

GERMANY—Oil-recycling plant. Provides know-how to build. Manfred Arnold, Hak Industrieanlagen u. Geraetebau GmbH, Meldaustr. 17, 3 Hannover 21. File 3428.

GERMANY—Water purifier, continuous (micro-stainer). For use in water works and purification plants. J. Meyer, Maschinen fabrik Zell J. Krueckels KG, Postfach 1125, Schopfheimer Str. 89, D-7863 Zell im Wiesental. File 3429.

GERMANY—Portable dancing floor for hotels and other facilities with rug flooring that normally prevents dancing. Offered by manufacturer of parquet flooring. Max J. Klisch, Mgr., Bembe Parkettfabrik Jucker GmbH KG, Wolfgangstr. 15, D-6990 Badmergentheim. File 3430.

GERMANY—Light diffusing louvred ceilings. Offered by manufacturer of lamps, electrical appliances. Fritz Reuter, Mgr., Durlum Leuchten GmbH, Guendenhausen 36, 7860 Schopfheim. File 3431.

GERMANY — Axial, centrifugal turbo blowers for high, medium, low pressure. May be equipped with heating devices to accelerate drying process. Heinz Lamberg, Mgr., Fischachtaler Maschinenbau GmbH KG, D-7164 Obersontheim-Oberfischach. File 3432.

GERMANY—Paint, lacquer for use in machine and apparatus construction industry including stove paint and annealing lacquer. C. Alexander Grau, Pres., Mankiewicz Gebr. & Co. Lack & Farbenfabrik, Georg Wilhelm Str. 189, 2102 Hamburg 93. File 3433.

SWITZERLAND — Industrial controls, electronic counters. P. Thamusallam, Eng., Erhardt & Jost Electronic, Rossligasse 2, 4450 Sissach, Baselland. File 3422.

SWITZERLAND—Motor vehicle accelerator control device. M. Ferralli, Dir., Bendiens World Service Ltd., Rennweg 89, 4020 Basel. File 3423.

SWITZERLAND—Toothbrush, with cartridges of fluid toothpaste. Offered by Switzerland's leading brush manufacturer. Cartridges are inserted in handle of brush; by pressing firmly on refill cartridge, small amount of fluid toothpaste is applied to bristles. R. Baumann, Export Mgr., Trisa, Buerstenfabrik AG, 6234 Triengen. File 3424.

SWITZERLAND—Stainless steel equipment for use in nuclear industry, vacuum chambers, chemical processing industries. Company manufactures most of nuclear fuel re-charging systems for nuclear reactors operating in Europe. H. U. Walser, Romabau AG, 8570 Weinfelden. File 3425.

UNITED KINGDOM—Precast and cellular concrete blocks for protecting exposed surfaces from erosion, and for general landscaping, making garden walls, seawalls, walkways. Have unique interlocking configuration and can be produced with standard production machinery. Blocks can be easily laid by relatively unskilled labor. R. I. Nightingale, Sales Mgr., Dytap Revetments (Westbrick) Ltd., 17 Paul St., Taunton Somerset TA1 3PF. File 3434.

UNITED KINGDOM — Scaffolding and propping system. Company claims 70% savings in putting up and dismantling time. Noel Webster, Group Publicity Mgr., Commercial Union House, 406 Eastern Ave., Gants Hill, Ilford, Essex 1G2 6NR. File 3435.

The following trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Program, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest indicated by codes 0111-1799 and 4011-8999 are based on the Standard Industrial Classification Manual, 1972; codes 20 through 39 come from Numerical List of Manufactured Products (New 1972 SIC Basis), MC72-1, 2. Codes beginning with 99 are from the TOP coding system.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Department's Export Administration Regulations. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1033, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Heavy construction

1629—PERU—Petroleos Del Peru invites all foreign oil companies to negotiate new petroleum operation contracts for offshore and Amazon Basin areas. Invitation is issued in accordance with Supreme Decrees No. 029-76-EM/DGH of 07/20/76; Nos. 009-77-EM/DGH & 010-77-EN/DGH of 03/01/77. Areas open to negotiate are situated in following zones. Offshore areas: 25 blocks of 400,000 hectares each, located between Bay of Bayovar and Port of Chala. Jungle areas: 25 blocks of 1,000,000 hectares each, located in northern jungle area. 14 blocks of 1,000,000 hectares each, located in central jungle area. 8 blocks of 1,000,000 hectares each, located in southern jungle area. Further information and basic documents regarding these projects available from Ing. Alberto Bruce, Gen. Mgr., Petroleos Del Peru (PETROPERU), Paseo De La Republica 3361, Lima 27. Telex: 25592 PU. Tel.: 411919.

• **1629—PERU**—Petroleos Del Peru invites international bids for study, design, construction, and financing of installations for secondary recovery operations by water flooding method in La Brea-Parinas Oil Fields, on Northwest Coast. Project involves some U.S.$60 million expenditures. Although this tender is for LAFTA countries only, it may involve future U.S. equipment sales. U.S. firms may also be able to work through LAFTA-based subsidiaries. Contact Ing. Alberto Bruce, Gen. Mgr., Petroleos Del Peru (PETROPERU), Paseo De La Republica 3361, Lima 27. Telex: 25592 PU. Tel.: 411919. Refer to Bid EXP-PRD No. 2-76.

• **1629—PERU**—Petroleos Del Peru invites bids for execution of secondary recovery operations by water flooding method in Lobitos, El Alto and Los Organos Oil Fields, on Northwest coast of Peru. Proposals to be presented are for continuation of operations presently being carried out directly by PETROPERU. Project involves some U.S.$90 million in expenditures. Bids can be presented until Sept. 29, at Internal Auditing Office of PETROPERU. Basic document costs 5000 soles (approx. $65.80), additional technical documents 1 million soles (approx. $13,158) and must be obtained from Ing. Alberto Bruce, Gen. Mgr., Petroleos Del Peru (PETROPERU), Paseo De La Republica 3361, Lima 27. Telex: 25592 PU. Tel.: 411919. Refer to Bid EXP-PRD No. 1-76.

Fabricated textile products

2399000—SOUTH AFRICA — Powder puffs. Bankers—Volkskas, Northcliff. Import-export brokers & manufacturers rep. seeks contact with U.S. suppliers of powder puffs. Firm has access to major dept. stores & retailing outlets & believes it could capture 60 percent of local market worth $100,000. Write: J. Child, Dir., Ackers Consolidated (Pty) Ltd., P.O. Box 35252, Northcliff 2115. Cable CHARISMA; Tel. (011) 678-6429.

Converted paper, board products

• **2640000—ZAMBIA** — Government invites bids for supply of various sizes and quantities (totaling 225 tons) typing paper. Bid deadline July 1. Prices must be quoted in Zambian currency, per ream, delivered to Government Stores: Lusaka, Ndola and Livingstone. Sample of each item offered must be submitted to Director of Supplies, P.O. Box 476, Lusaka. Tender documents containing complete specifications available from U.S. Department of Commerce, Construction and Forest Products Division, Room 2120, Washington, D.C. 20230; 202-377-3530.

2654311—GERMANY — Paper plates & spoons. Firm has 10 representatives throughout Germany. Markets outdoor and garden line under Till tradename. Founded 1960, annual turnover dm 5 million. Bank refs: Deutsche Bank AG, Commerzbank AG, and Sparkasse, Bielefeld, all located at 4800 Bielefeld. Reply by fastest means to—Ursula Hildebrand, Neochemie Zippel & Co., Postfach 9524, 4800 Bielefeld 1. Tel.: 0521-37047; tx.: 932273.

Drugs

• **2834000—SRI LANKA**—State Pharmaceuticals Corporation invites tenders for supply of drugs and pharmaceutical preparations. Tender No. DHS/8/3; closing date July 6. Copy of tender documents available from L. McIntyre, U.S. Department of Commerce, Room 2106, Washington, D.C. 20230; 202-377-2239.

Glass, glassware

3229121—SWEDEN — Cocktail glasses, longdrink glasses, highball glasses, etc. Small company, estab. 1974. Represents Irwinware Inc., Long Island, N.Y. Sales area: Sweden. According to local credit sources, company financially sound & has met payments promptly. Reply to—Bo Ekelund, Bo Ekelund Import Trading, Blasutvagen 37, S-122 30 Enskede. Tel. 08/49 56 13.

3231633, 3262014—DOMINICAN REPUBLIC—Table, kitchen, art & novelty glassware; giftware; china tableware; novelties & specialties, metal. Direct sale & rep. Incorporated 1946 to take over & continue business which had operated since 1917 under name of "Gilberto Pellerano." One of leading importers, distributors & retailers of cosmetics, perfumes, crystalware, chinaware & toys. Paid in capital $625,000; annual sales vol. $3,000,000. Employs 108. Correspondence preferred in Spanish. Reply to—Gilberto Pellerano Hijo, Pres., Pellerano, C. por A., Charles Sumner No. 15, P.O. Box 1749, Santo Domingo. Tel 566-7181.

Steel mill products

• **3310000—THAILAND**—24,000 mt 80 lb. flat bottom steel rails, without bolt holes, length 18 meters, weight 716.40 kgs per piece; 9,000 mt fishplate for 80 lb. rails; 36,000 mt fishbolts and nuts for 80 lb. rails. Tender No. 7501; bid deadline July 5. State Railway of Thailand, Yose, Bangkok. Tender documents available from above address at $25 per set.

Iron, steel foundries

• **3320000—THAILAND** — Various sizes and quantities of pipe, ductile iron, cast iron, and steel. Tender No. MWWA-A-110; bid deadline July 2. Metropolitan Water Works Authority, Siyek Mansri, Sapan Dam, Bangkok. Tender documents available from above address at $125 per set.

Rolling, drawing nonferrous metals

• **3350000—PARAGUAY** — 70,000 meters copper wire, bare, 25 sq. mm; 100 000 meters copper wire, bare, 16 sq. mm; both for electrical transmission. Tender No. 146/77; bid deadline July 12. Division de Adquisiciones, Departmento de Licitaciones-Ande, Calle Padre Cardozo 355, Asuncion. Tender documents available from above address at guaranies 3,780 (about $30) for two sets. U.S. firms must have local representative.

Cutlery, hand tools, gen'l hardware

3423298—GERMANY — Gardening edged hand tools. Terms of payment & delivery to be negotiated. Firm is important

wholesaler of gardening equip. & fertilizers. Employs 35 traveling salesmen & has considerable sales. Enjoys excellent reputation. Finances said to be sound & obligations met promptly. Considered suitable business partner. Reply to—Herr Buchner, Euflor GmbH Fuer Gartenbedarf, Nymphenburgerstrasse 120, 8000 Muenchen 19. Tel. 089/184064.

Construction machinery

● **3530000—INDIA**—Design, supply, erection and commissioning of hoisting system for Rajpura Dariba Mines. To be installed in shaft 6 meters dia. and 575 meters deep and comprise: skip winder for hoisting 3,000 ton-per-day lead-zinc ore, and cage winder for hoisting and lowering men and materials from 10 different levels to surface. Tender No. COMP(K)15/RD/967(76); bid deadline July 5. Controller of Purchase, Hindustan Zinc Ltd., 11-A New Fatehpura, Udaipur, Rajasthan. Tender documents available for RS. 100 (approx. $11.50) per set from above address until June 30. Interested bidders should purchase tender documents prior to submitting bids.

Metalworking machinery

3544000—DOMINICAN REPUBLIC—Paper & paperboard converting equipment, all types. Formed 1919 with original paid in capital of $30,000, since increased to $205,000. Imports & distributes equipment & supplies for graphic arts industry, & operates as commission agent for all types of paper & paperboard, converting machinery, packaging machinery. Combined annual sales volume in imports & commissions $2,500,000. Direct sale & rep. Reply to—Ramon M. Baez, Pres., Ramon L. Baez, C por A, Sanchez No. 204; P.O. Box 573, Santo Domingo. Cable RABASZ, telex RCA-3264105; tel 682-3426.

Special industrial machinery

3559000—ROMANIA — Seeking suppliers of elasto-plastic and rubber processing machinery. Reply to ROMCHIM, BD. Dacia 13, R-70185 Bucharest, Attn: Mr. Bieltz.

3562626—FRANCE — Ultrasonic welding machines (for textile industry), laser welding machines. Estab. 1947. Importer of man-made fibers & waste, mfr. & exporter of wadded fabrics, paddings & upholstery filling; processed waste & recovered fibers. Wishes import welding equip. for clothes industry. Employs 97. Marketing territory—Europe, N. Africa. According to firm's statement, annual sales reached 16,027,827 francs. Bank ref. Credit Lyonnais, 76503 Elbeuf. Good overall reputation. WTDR 4/77. Direct sale & agency. Reply to—R. Comalada, Pres. Gen. Mgr., P. E. Guerot & Cie, 21 Rue P. Curie, 76503 Elbeuf. Telex 180 056; Tel. 77 19 52 - 83 32 07.

Communications equipment

● **3661000—ALGERIA** — Service MTG, Sonatrach Base, Irara, Hassiamessaoud, has issued tender for supply and installation of interphone network at Sonatrach Base. Bid deadline June 30. All offers and correspondence must be in French. Copy of specifications available from above address.

● **3662000—GREECE**—Ministry of Commerce, State Purchases Directorate 4, Kanningos St., Athens, has issued tender number 515/1977 for supply of 200 telecalling (radio) and message transfer receivers for Greek Gendarmerie. Bid deadline July 5. Copy of specifications available free from above address.

● **3661000—GUATEMALA** — Egar Quinonez F., Mgr., Secretaria De La Division de la Planeamiente Y Dieseno, 5th Piso, Avenida 12-37, Zona 1, Guatemala City, has issued tender number 2-77 for supply of 300 teleprinters with speed of 7.5 cps. (or 50/75 audios). Bid deadline July 6. Offers must be in Spanish. Copy of specifications available from above address.

● **3662000—INDIA** — Director General, Posts & Telegraphs (MMD Section), Parliament St., Dak Tar Bhawan, New Delhi 110001, has issued tender number 12-211/77-MMD for supply of four 400 watt M.F. transmitters and two sets of Lincompex terminal equipment. Bid deadline July 4. Copy of specifications available from above address for Rs.20 ($US 2.74) per set.

● **3661000—IRAN** — Telecommunication Company of Iran, Avenue Koorosh Kabir, Bisim Pahlavi, Tehran, has issued tender number 36/29 for supply of 350 Farsi and English teleprinters with spare parts. Bid deadline June 28. Copy of specifications available from above address for 2,000 rials (rials 70.50=U.S. $1) per set.

Engineering, laboratory, scientific, research instruments

● **3811000, 3822000, 3832000 — YUGOSLAVIA**—Andrija Roke, Velebit OOUR Inozemna Zasturstva, Babukiceva 3A, 11000 Zagreb, has issued tender number Shuzbeni List SFRJN019, 4/8/77-Z 680 for supply of laboratory, scientific, surveying, drafting, optical, and environmental control instruments. Bid deadline July 8. Copy of specifications available from above address.

Measuring & controlling devices

● **3824000—GREECE**—Ministry of Commerce, State Purchases Directorate 2, 20 Kanningos St., Athens, has issued tender number 474/1977 for supply of 20 self-regulating automobile traffic counters. Bid deadline June 28. Copy of specifications available free from above address.

● **3825000—CYPRUS**—S. G. Anastassiades, Chief Engineer and General Manager, Electricity Authority of Cyprus, P.O. Box 4506, Nicosia, has issued tender number 118/1977 REF E 3/553/118/77/3733/77 for supply of 36,000 single-phase 2-wire 20A-80A meters; 3,000 three-phase 4-wire 10A-60A meters; and 300 three-phase 4-wire 100A meters. Meters should conform with British Standards Institute or other authoritative standards. Electrical supply 240 VAC. Bid deadline July 15. Conditions of contract are based on those contained in Institution of Electrical Engineers Model Form Bs. Copy of specifications available from above address for 20 Cyprus pounds (US $48.60) per set.

Surgical, med., dental instruments

● **3841000—YUGOSLAVIA**—Klincni Center, Commercial Dept., Commission for Bids, Bohoriceva 28, 61000 Ljubljana, has issued tender number Sluzbeni List SFRJ, No. 21, of April 22, for supply of ten monitors for dialysis solution and blood transfusion. Requirements: single-pass unit with individual auto. proportional system; efficient system of re-airing; program for hot disinfecting. For blood transfusion; blood pump; double manometer for blood pressure; system for control of negative arterial pressure; air detector in veins collector; magnetic shutter; dialysis with one needle; and pump for continuous heparinization. Bid deadline July 22. Value of proposed purchases estimated to exceed $100,000. Bids in four copies should contain price, rate of exchange, delivery date, guarantee terms and period, statement of how many years spares will be available, mounting and servicing data, safety standards, trade references, and financial terms. Submission should contain a prospectus of equipment. On envelope, write "Official Gazette S FRY-NO.21."

Photographic equipment, supplies

3861600—HONG KONG—Metalized polyester film for making a.c. and d.c. capacitors. Small but aggressive firm with satisfactory financial status. Good sales contact. Direct sale & agency. Cable—S. H. Leung, Mgr., Safety Electrical Mfg. Co., S. S. PO, P.O. Box 8425, Hong Kong. "SAFELECO" HK; tel. K-863747.

Pens, pencils, office materials

3955112/4 — DOMINICAN REPUBLIC—Typewriter ribbons. Dir. sale & rep. Organized 1964 to engage as distributor & commission agent of pharmaceutical products. Paid in capital of $18,000. Annual sales vol. $124,000. Reply to—Camilo F. Leslie, Pres., C. C. Leslie, C. por A., Moises Garcia No. 622, P.O. Box 662, Santo Domingo. Cable LESLIE; tel 682-3636.

Costume jewelry, novelties, buttons, notions

3964269 — GERMANY — Sewing, hand knitting, crocheting, darning, lace making needles, new products, if possible. Terms of delivery c.i.f. Muenchen. Terms of payment 90 days net. Founded 1951. Employs 6 plus 12 traveling salesmen. Has average sales of dm 1 million per year. Enjoys good reputation. Considered suitable trade partner. Reply to—Hans Graecmann, Hans Graecmann KG, Perlschneiderstrasse 12, 8000 Muenchen 60. Tel. 089/881995. Direct import for resale and/or agency.

Services incidental to water transp.

4463—EGYPT—MISR/SAUDI Offshore Co. of Alexandria is seeking U.S. partner to joint bid with them on international tender for minor repairs, cleaning, painting and general maintenance of 16 offshore platforms and rigs operating in Gulf of Suez and Red Sea. MISR/SAUDI Offshore Co. is joint venture between Egyptian Ship Repair and Building Co., subsidiary of Ministry of Marine Transport and private Saudi capital. Interested firms contact William S. Gaines, U.S. Department of Commerce, CAGNE/BIC, Rm. 3203, Washington, D.C. 20230, 202-377-4441.

Business services

7392—SAUDI ARABIA — Arab Satellite Communication Organization in Riyadh is seeking consultancy services to establish regional satellite telecommunications system covering organization membership. Firms interested contact William S. Gaines, U.S. Department of Commerce, CAGNE/BIC, Rm. 3203, Wash., D.C. 20230, 202-377-4441.

7392—SYRIA—Minister of Electricity is interested in obtaining U.S. consultancy services on practicality of combining electric power and telephone lines on same poles in rural areas. Project would cover some 13,000 villages. International firms communicate directly with Eng. Ahmad

Omar Youssef, Minister of Electricity, Sultan Salim St., Damascus.

7392 — GUATEMALA — Government's Technical Institute for Training and Productivity has announced call for inscription for consultants interested in providing services on financial information systems and administrative procedures. Firms must submit name, address of representative, experience and capacity in relation to similar services as those required and any other information considered useful. Inscribed firms will be subject to further preselection by INTECAP and to eligibility declaration by Inter-American Development Bank. General objective of agreement is to advise INTECAP personnel on development and strengthening of its technical, administrative and teaching capacity, so they are able to execute programs with greater efficiency. Principal consultation requirements: Type—financial information systems and administrative procedures. Duration—18 man/mos. Probable contracting date—Dec. 1977. Probable starting date—Feb. 1978. Place—Guatemala City. Responsibilities—evaluate & develop integrated system of financial information, including following systems: accounting, budget & costs, & financial information, with internal control. Elaborate acquisition procedures & inventory & supplies control & management. Develop & evaluate computerization programs to obtain census of contributors, tax payment control, & develop fiscalization system for contributor's payments. Evaluate & present report on mechanization needs to process information. Coordinate programs & proposed procedures with operation of regional centers' plan of INTECAP-IDB project. Inscription documents should be presented no later than July 1 to the Administration Dept., Instituto Tecnico De Capacitacion y Productividad—INTECAP, 12 Calle 4-17, Zona 1, Guatemala City, through representative or by certified mail. Work to be financed by IDB. If you do not have a rep., contact nearest Department of Commerce District Office.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Miscellaneous marine products

0919—JAPAN—Fresh squillae, est. annual purchase $40,000; fresh sea urchins, est. annual purchase $50,000. Importer/distributor of general houseware. Wishes to diversify line to importation/distribution of marine products. Fresh squillae and sea urchins must be sent by air. Capital $20,000. 1976 sales $800,000. Ref. Settsu Trust Banking Corp., Takatsuki Branch, Takatsuki City, Osaka Pref. Reply to—Ms. Yukiko Miki, Pres., Tsushima Co., Ltd., 1-16 Daizoji 1-Chome, Takatsuki City, Osaka Pref. 569. Tel.: 0726-83-6674.

Wood products

2499580—GERMANY — Wooden housewares, wooden gift articles. Buying cooperative for 820 retail stores in Germany. Established 1972, annual sales dm 250 million. Employs 350 in 3 distribution centers. Financial reference: Sparkasse, 4800 Bielefeld. Good reputation. Reply by fastest means to—Karl-Heinz Kraemer, Ek Grosseinkauf EG, Oldentruper Str. 226, 4800 Bielefeld 1. Tel.: 0521/20921; tx.: 932539.

2499498 — NEW ZEALAND — Marine buoys. Recently established to provide fishing & marine equipment & marine communications equipment to fishing industry. Too new to have established credit reputation. Write—S. K. Middleton, Mng. Dir., Camford Marine, Ltd., Wynard House, 17 Moray Place, P.O. Box 1014, Dunedin. Telex NZ5620; tel. 77-741.

Drugs

2834000, 2844000—WEST GERMANY—Well established firm seeks cooperation with U.S. pharmaceutical manufacturers for sale of medical dermatological cosmetic preparations; generic drugs; over-the-counter preparations; and diagnostics. Founded 1907, has staff of 200 and sells exclusively through dispensaries and apothecaries in West Germany. Also wishes to obtain licenses to manufacture U.S. pharmaceutical specialties. Send communications to: Drs. Bernhard Kimmell and Wilhelm Ott, Stada Arzeneimittel A.G., D-6368 DAB VILBEL-DORTELWEIL, West Germany. Telephone: 06193-2001.

Miscellaneous products

2844000, 3272000, 3292000, 3540000, 3710000—UNITED ARAB EMIRATES—Dubai firm with branches and agents in United Arab Emirates and other Middle East countries is seeking to represent U.S. firms for following product lines: auto accessories and spares; building materials and hardware; machine tools; electrical equipment and appliances; cosmetics and perfume; foodstuffs. U.S. firms interested in such representation should respond directly to Sahil Kaff & Sons, P.O. Box 5358, Deira, Dubai. Telex: 6119 RGT Dubai. Please send copy of initial correspondence to Albert J. Planagan, BIC/CAGNE, Room 3203, U.S. Department of Commerce, Washington, D.C. 20230.

Special industrial machinery

3554025—AUSTRALIA—Pulp screens as follows: conically drilled screen plates, conically slotted screen plates, screen drums for strainers & classifiers, screen mantles for different types of presses, pressure screens of inflow & outflow type, press plates designed for laminated hardboard & chipboard industry, & screen plates for continuous cellulose digester. Total market est. $1,000,000 yr. Acts as agent for companies selling raw materials & equipment accessories to Australian pulp & papermaking industry. Seeking agency relationship with manufacturers of specified screen plates. Reply to—Peter G. Goddard, Mng. Dir., Maxwell M. Goddard, 63 Trafalgar Ave., Lindfield, N.S.W. 2070. Cable MAXDARD; tel. 465950.

3559589 — THAILAND — Machines to make lead tubes for toothpaste. Requests catalogs, general prod. infor. & prices. Reply to—Charoon Horatanaruang, Mgr., Tech Chemicals Co., Ltd., 77/6 Soi Cham Chand, Ekamai Road. Off Sukhumvit, Bangkok 11. Tel. 391-6615.

Household appliances

3634210—GERMANY—Electric razors & dry shavers, men's & women's. Broilers, with and wihout rotisseries; automatic coffee makers, vacuum & percolator types; deep fat fryers; automatic toasters; waffle irons, sandwich grills, griddles, etc.; frying pans (skillets). Payment & terms of delivery to be negotiated. Founded in 1976. Employs 5. Business said to be developing well. Finances appear in order & obligations met without delay. Considered suitable business partner. Reply to—Maria Maya, Lothar F. Maya, Saeulingstrasse 9, 8000 Muenchen 21. Tel. 089/577981.

Communications equipment

3661167—ISRAEL — Specialized switching, incl. video, digital, & computer controlled. Requests literature & f.o.b. quotations. Payment preferably c.o.d. basis. Company newly established; importer of electronic packaging equipment, electrical equip. & medical & scientific instrumentation from U.S. Employs 4. WTDR in preparation. Reply to—Ariel Goldman, I.S.P. Ltd., P.O. Box 33317, 11 IBN Gvirol St., Tel Aviv. Telex 341118 Ext 5633 BXTV IL; tel 03-234238.

3662622—AUSTRIA — Large ultrasonic cleaning units for use in hospitals, especially for cleaning blood from instruments. Interested in distributorship agreements for Austria, W. Germany, Italy, Hungary, Yugoslavia, & Czechoslovakia. Large distributor of health care products with subsidiary in Milan, Italy. Other markets in Europe covered by sister company. Documented offers with price and product information requested. Reply to—Karl Kronik, Mng. Dir., Comesa K.G., Spitalgasse 19, A-1091 Vienna. Cable COMESAMED VIENNA; tel. 436125.

Electrical mach., equip., supplies

3693092 — GERMANY — Electrocardiographs; other electromedical machinery & equip. for cardiological therapy & diagnoses. Terms of payment & terms of delivery to be negotiated. Firm acts as distributor for electromedical apparatus & equip. Employs 15 plus 6 traveling salesmen. Sells throughout Europe & is reportedly doing well. Enjoys good reputation & is considered to be suitable business partner. Reply to—Guenter Stemple, Inform Elektromed. Geraete GmbH, Landsbergerstrasse 487, 8000 Muenchen 60. Tel. 089/883078.

Scrap materials

5093—GERMANY — Unbleached percale & muslin remnants for buffing; poplin remnants for buffing. Manufacturer of polishing discs & grinding brushes. Requires cotton products only. Founded 1927, employs 130, turnover dm 4 million. Bank refs: Westdeutsche Landeszentralbank, Commerzbank AG, & Sparkasse Bielefeld, all at 4800 Bielefeld. Reply by fastest means to—Reinhard Eickelmann, H. E. Eickelmann GmbH & Co. KG, Postfach 2423, 4800 Bielefeld. Tel.: 0521-34066; tx. 932813.

5093—ITALY—Wool rags, est. annual value $1.5 million, sought by importer, sorter, & wholesaler of wool rags, located in Prato textile area. Quote c.i.f. Leghorn against L/C. Buyer is small reliable co. which does satisfactory vol. of business (annual volume $1.5 million). Estab. 1960, imports wool rags (through local agents) mainly from U.S., sorts them & wholesales sorted rags to many Prato textile reprocessing firms. Also has associated co. for mfr. of reprocessed wool fabrics. Reply to—Giuseppe Pagnini, Partner, F.LLI Pagnini, Via Masaccio-Bagnolo, 50045 Montemurlo, (Firenze). Tel. 0574/799545.

Future Construction Abroad

MOROCCO—Government is seeking qualified engineers for engineering study on equipping and development of areas in Loukkos Region for **dry land farming** (16,000 & 32,000 hectares). Project financed by Moroccan Central Government Investment Budget. Firms interested can obtain bidding file, including specifications, from Bureau Des Marches, Monsieur le Directeur, Office de Mise en Valeur Agricole de Loukkos, ORMVAL, B.P. 48, Ksar el Kebir, Morocco, for payment of DH 200 (approximately $45) plus postage. Strongly advise that bid submission be in French. Please send copy of original correspondence to Pete Zantal, CAGNE/BIC, U.S. Department of Commerce, Washington, D.C. 20230, (202-377-4441), so he may keep you informed of subsequent developments on this project. OPIC.

SAUDI ARABIA — West German company, Schweitzer Consulting, Esslinger Steige 23, D-7312 Kirchheim Unter Teck, West Germany (Telephone: 07021-45459; Telex: 07-267248; Cable: CONSULT) seeking U.S. contractor interested in participating in **public construction works** to be executed in Saudi Arabia. Eugen Schweitzer, the contact, desires only U.S. firms with annual turnover at least $50 million, and which are prepared to take on orders of that size or more. To facilitate evaluation, American contractors should send colored documentation of construction projects they have executed. Further details available from Schweitzer at above address. Please send copy of original correspondence to Pete Zantal, CAGNE/BIC, U.S. Department of Commerce, Wash., D.C. 20230.

LIBYA—Council of Reclamation and Land Reform, Kufra and Sarir Authority, Ibraham Hafed Bldg., Omar Mukhtar St., P.O. Box 190, Tripoli, is seeking qualified contractors for **drilling of 30 experimental and production water wells at Tazebo Project.** Will be financed by Libyan Government through Libyan commercial bank. Tender documents and specifications may be obtained from Council upon payment of LD 100($340). Offers must be accompanied by initial guarantee of LD 10,000($34,000). Please send copy of initial correspondence to Pete Zantal, CAGNE, U.S. Dept. of Commerce, Washington, D.C. 20230. Closing date for submittal of proposal is July 15.

OMAN—Tender Board, Office of Governor, P.O. Box 787, Muscat, is seeking qualified contractors for **drilling and pumping installation of eight production wells for water.** Foreign firms advised to have local agent or representative, and to be registered with Tender Board. Arab Development Co. (Contact: Samir Boury), would like to act as agent for this tender. Closing date for submittal of documents July 4. Contact Pete Zantal, 202-377-4441.

Visiting Buyers & Officials

SWITZERLAND — Businessman recently in Washington, D.C., requested assistance in locating American suppliers of three or four **machines to make corks for wine bottles.** Swiss firm has cork tree plantation in Portugal, and is seeking equipment to make stoppers. For name and address of the Swiss businessman, contact Peter B. Alois, Room 2322, Washington, D.C. 20230, 202-377-3265.

ZAIRE—Businessman interested in hearing from manufacturers of **record pressing equipment** for both stereo and mono records, and **vinyl and extenders** and **paper sleeves and jackets.** Also interested in building **complete sound recording studio,** including microphones, mixers, recording devices, etc. Has also expressed interest in **prerecorded soul music records,** both 45 and 33-⅓ rpm. For further information contact Theresa Rettig, Foreign Buyer Program, U.S. Department of Commerce, Room 2322, Washington, D.C. 20230, 202-377-3265.

ISRAEL—Messrs. Gerber and Mucznik of Tel Aviv are interested in becoming representatives for following products: **unvented gas residential heating stoves; radiant gas residential stoves; radio and radio/phonograph combinations as well as televisions, phonographs and stereo recorders.** Contact Theresa Rettig, 202-377-3265.

AUSTRALIA — Businessman seeks contact with manufacturers of **metal and wooden outdoor furniture.** For further information contact U.S. Department of Commerce Project Officer Jim Nader, Foreign Buyer Program, Room 2322, Washington, D.C. 20230, 202-377-3265.

NIGERIA—Ejike Onokala is interested in being contacted by U.S. manufacturers or suppliers of **educational toys.** He may be contacted directly at 1833 New Hampshire Ave., NW., Apt. 508, Washington, D.C. 20009; 202-332-7904.

NIGERIA — Businessman seeks contact with manufacturers or suppliers of following items: **general hospital equipment; all types scientific laboratory equipment; typewriters and related equipment; dental equipment.** Contact Taiwo P. Ogunmakinwa, Giroe Agencies, Ltd., 318 Herbert Macaulay St., Yaba, Lagos. Cable: GIROEX LAGOS NIG.

AUSTRALIA—J. H. Williams of New South Wales plans to visit the U.S. in July to contact U.S. manufacturers of non-metal **roofing tiles or shingles** made from P.V.C., vinyl, fiberglass or any other light-weight material with color throughout to be used for new construction or over existing roofs. Contact Theresa Rettig, 202-377-3265.

AUSTRALIA—C. Nuttall of New South Wales is interested in hearing from U.S. manufacturers or suppliers of **prints and posters** with general mass appeal. Theresa Rettig, 202-377-3265.

SWEDEN—Businessman visiting U.S. in June, seeks contact with manufacturers of following equipment: **isotope laboratory equipment; computer systems for automatic control; camac data systems and peripheral equipment.** Jim Nader, 202-377-3265.

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Birmingham, Ala., 35205, Suite 200-201. 908 S. 20th St. (205) 254-1331.

Boston, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

Buffalo, N.Y., 14202, Room 1312, Federal Bldg., 111 W. Huron St. (716) 842-3208.

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Dallas, 75242, Room 7A5, 1100 Commerce St. (214) 749-1515.

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Detroit, 48226, 445 Federal Bldg., 231 W. Lafayette (313) 226-3650.

Greensboro, N.C. 27402, 203 Federal Bldg., W. Market St., P.O. Box 1950. (919) 378-5345.

Hartford, Conn., 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.

Honolulu, 96850, 4106 Federal Bldg., 300 Ala Moana Blvd., P.O. Box 50026 (808) 546-8694

Houston, 77002, 2625 Federal Bldg., 515 Rusk Ave. (713) 226-4231.

Indianapolis, 46204, 357 U.S. Courthouse & Federal Office Bldg., 46 E. Ohio St. (317) 269-6214.

Los Angeles, 90049, Room 800, 11777 San Vicente Blvd. (213)824-7591

Memphis, 38103, Room 710, 147 Jefferson Ave. (901) 521-3213.

Miami, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.

Milwaukee, 53202, 605 Federal Office Bldg., 517 E. Wisconsin Ave. (414) 224-3473.

Minneapolis, 55401, 218 Federal Bldg., 110 S. Fourth St. (612) 725-2133.

New Orleans, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.

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Newark, N.J., 07102, Gateway Bldg. (4th floor) Market St. & Penn Plaza (201) 645-6214.

Omaha, Neb., 68102, 1815 Capitol Ave., Suite 703A (402) 221-3665.

Philadelphia, 19106, 9448 Federal Bldg., 600 Arch St. (215) 597-2850.

Phoenix, Ariz., 85073, 2950 Valley Bank Center, 201 N. Central Ave. (602) 261-3285.

Pittsburgh, 15222, 2002 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.

Portland, Ore., 97204, Room 618, 1220 S.W. Third Ave. (503) 221-3001.

Reno, Nev., 89509, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.

Richmond, Va., 23240, 8010 Federal Bldg., 400 N. 8th St. (804) 782-2246.

St. Louis, 63105, 120 S. Central Ave. (314) 425-3302.

Salt Lake City, 84138, 1203 Federal Bldg., 125 S. State St. (801) 524-5116.

San Francisco, 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave., (415) 556-5860.

San Juan, P.R., 00918, Room 659, Federal Bldg., Chardon Ave. (809) 753-4555.

Savannah, 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. (912) 232-4321, Ext. 204.

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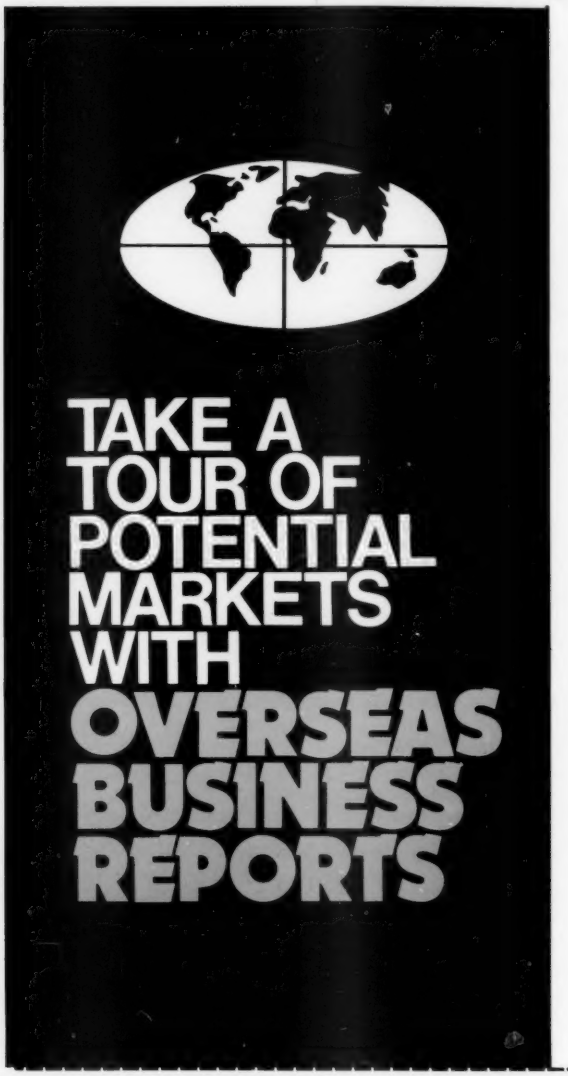

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